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LECTURE.

HYPNOTISM, AND ITS USE IN MEDICINE.[1]

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THE patient of whom I speak is a woman, who has been treated by hypnotism both abroad and in this country, and who now seeks relief from a certain condition by the same means. I shall hypnotize her before you, not because I am an exponent of this practice, nor because I wish you to follow it when practicing, but because every intelligent physician should know of the process, its method, and its limitations.

The fact of hypnotism cannot be disputed. It is very easy to hypnotize certain animals—as birds, rabbits, etc.—by attracting their attention, by stroking, by drawing a chalk line in front of them, or by other means. They pass into the first stage of hypnotism or catalepsy. This stage is readily induced in the human being also. During this stage there is rigidity of the muscles. In the next stage, instead of rigidity of the muscles, there is relaxation, and the subject is made deeply asleep, the state being known as lethargy. In the third stage, the subject makes automatic movements at the command of the operator, and this condition is called somnambulism. Catalepsy does not assist us in medicine, lethargy but little, and somnambulism not at all.

The subjects capable of being hypnotized belong to the great class of neurotics, especially those of a hysterical tendency. In fact, many of the symptoms connected with hypnotism resemble those of hysteria.

The theories that explain hypnotism are mostly metaphysical, and of no satisfaction to the physician. To be practical for him they must have a physiologic or an anatomic basis. To explain the process, we must have a clear conception of the physiology of natural sleep, and this requires an understanding of the nervous system. The nervous system consists of

[1] Clinical Lecture delivered at the Jefferson College Hospital.

cells, not fibers and cells. What were formerly known as fibers are but processes of the cells, and probably neither the cells nor processes are fixed, but are capable of motion. Some years ago I suggested that the processes of the cells approach each other and are in contact when we are awake. When they become tired, they shrink, and the processes are no longer in contact and there is no longer consciousness. This hypothesis has since been demonstrated to be true, both as regards the cells in the brain and the spinal cord.[2] If these facts be applied to the question of hypnotism, the mystery disappears. This state is induced ordinarily in first or early trials by inducing fatigue. Thus by fixing the eye of the subject upon a bright object for a long time, the muscular apparatus of the eye becomes fatigued, and sooner or later the partial sleep of hypnosis is induced. This may be shown by divergence of the eyeballs, dilatation of the pupils, movements of swallowing, and at times deep breathing.

During this state suggestions are possible through the ear because this organ is still in close relation with the cortex. The person believes what the operator tells him because the suggestions are not contradicated or corrected by the evidence of the other senses, *i. e.,* what the patient sees or feels. If, for instance, a person in such a state be told that there is a garden of flowers about him, although he is in reality in a room, there is no way for him to know the truth, sight and touch are both shut off. The hypnotizer has access to the cortex, then, by way of the ear, and all the other senses are suspended, as far as the cortex is concerned, and do not interfere with or correct the suggestions made. This explains the increased suggestibility of hypnotism—how it is that suggestions are understood and obeyed by the subject, and how they can be made to perform acts out of all keeping with their surroundings.

After these preliminary remarks, let me say that if hypnotism is ever used by a physician it should be only for an obvious and definite purpose. One or more persons of the same sex as the patient should invariably be present. Accusations have been made where such precautions have not been taken. It may be possible that voluptuous sensations are experienced by certain subjects while in the hypnotic state, and these might be made the basis of accusations. Whether this be true or not, I cannot say; but the physician runs a risk of such consequences unless he is protected by witnesses. Again, the physician should be honest with his patient, and tell exactly what the process is, and that it is for the purpose of relieving the pain or whatever condition may be present.

This young woman came to me some few years ago complaining of a frightful pain in her left shoulder. A careful examination showed no organic disease in the joint, or of the nerves supplying it or adjacent structures. Treatment was unavailing. She stated that she had once

[2] Odier in Switzerland, Hodge in this country. Wiedersheim actually saw nerve cells move in the living animal, an entomostracan.

before been relieved of a similar affection by hypnotism, and asked that it be tried for the existing trouble. I did this, and the pain disappeared. She comes now complaining of rapid breathing and a choking sensation, which is very severe at times.

In inducing the hypnotic state, it is not necessary that a bright object be used to attract the attention of the patient; a finger merely upon which the person fixes his eye is often sufficient. Further, a profound degree of hypnotism is not requisite. If hypnotism is ever justifiable it is only in the degree which this patient now presents, which I have induced by asking her to concentrate her attention upon my finger as I hold it before her. This is only a light sleep, which I could deepen, if necessary, by stroking her face and eyes. After the patient is in this condition, three things are to be done. First, you are to say to the patient that the symptoms will disappear and never return. Additional weight to the suggestion may be given by grasping the patient's hand with the gesture of assurance and by repeating the suggestion several times, naming the special symptoms of which he complains and stating positively that he will not suffer from them again.

Having done this, shall I now awaken the patient? Not yet; for we owe certain duties to such patients, and must take certain precautions for their welfare. The suggestion must be made to the patient that no one can hypnotize him unless he is willing. This is a very essential point, and must not be omitted. It is one of the dangers of hypnotism that the patient becomes more and more susceptible to it. In some cases hypnotism may be brought on spontaneously or by the unintentional stare of a stranger. For this reason, it is necessary to say to the patient, while still asleep, that hypnotism will always depend on his deliberate desire, or willingness, to have the state produced.

We must remember, further, that this hypnotic state is essentially dependent on an induced fatigue, and that prolonging it increases this fatigue. If greatly prolonged, it will be found that even the processes of nutrition are changed, as evidenced, for instance, by a marked diminution in the amount of solids in the urine. Because of this fatigue, the patient will feel depressed and tired if brought out of the hypnotic state without anything having been done to counteract this effect. Finally, then, we must say to the patient that when he awakes he will feel perfectly well, far better, indeed, than he did before the treatment, and will not be in the least tired from the experience.

Having borne these three points in mind, we are now ready to awaken the patient. We could amuse ourselves with various somnambulistic effects if we chose to produce that condition, but we leave that to the public stage and the pretender. Such demonstrations have no therapeutic value, and are unprofessional; no physician should ever practice them.

Subjects can be awakened by various methods, *e. g.*, blowing on the face, slapping them lightly, or by saying to them that they will awake in a given length of time. I say to this person that she will awake in just two minutes; and she does in slightly less time.

We come now to the question as to the practical value to the physician of hypnotism. In my experience, the value is very little. One may occasionally cause the permanent disappearance of a symptom, but more often the symptom reappears. It must be remembered that where diseases are caused by a pathological lesion, hypnotism and suggestion are utterly without avail. Mere suggestion to the cortex can have no effect on an organic lesion. Again, if the symptom complained of disappears, it frequently happens that others arise to take its place. The patient whom I have just hypnotized is an illustration of this truth. Again, there is a certain pleasurable sensation in the sleep of hypnotism. It shuts out the outside world, with all its sickness and cares, and, in addition, suggestions are made that the patient feels happy and perfectly well. In short, hypnotism acts like a psychic stimulant, and patients are very apt to acquire "the hypnotic habit"; they come back to the clinic week after week for a repetition of the treatment.

My belief is, that the physician should not practice hypnotism unless under very exceptional circumstances. Hypnotism is something that the public do not understand, and it is better not to attract attention or comment by the use of this method of treatment. If it is employed, the greatest precautions must be taken in regard to witnesses and the other points I have enumerated. In therapeutics, then, hypnotism plays a very subordinate part, except in rare cases. As regards the anesthesia, which may be induced in hypnotism, minor operations have been done under its influence. One surgeon here performed an operation on the inguinal glands in the hypnotic state, and the patient knew nothing of the operation until afterward. A regular anesthetic could not be administered in that case for some reason or other. However, in the majority of cases, the anesthesia is not deep enough for surgical operations to be done. I am liberal enough, although opposed to its use, to say that it may have a legitimate field in cases where anesthetics cannot be given at all. For medical purposes, its use is very limited.

I should add that very much can be accomplished by suggestion in certain patients without hypnotism. Thus, giving an inert powder, such as starch, with the statement that it will produce sleep, or a few drops of distilled water with the statement that the medicine is very powerful, and will relieve pain, or making the strong and repeated assurance that the symptoms complained of will definitely disappear. Such expedients as these are of great value in hysterical patients, the very class also most readily brought under the influence of hypnotism.

ORIGINAL PAPERS.

THE TREATMENT OF THE CHRONIC DISEASES OF THE KIDNEYS.[1]

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GENTLEMEN: I desire to bring forward for discussion a few questions which relate to the chronic renal diseases, and especially the dietetic treatment of chronic contracted kidneys. Since in the year 1890 the Congress last occupied itself with this theme under the lead of Senator and Ziemssen, no essentially new points of view have been suggested. There has grown up in the meantime in practice a certain plan, according to which the regulations concerning diet are accustomed to be made. This, roughly outlined, is as follows: A moderately rich allowance of albuminous food, giving the preference to the vegetable albumens and to the albuminous constituents of milk; a liberal supply of fresh and cooked fruits, and simple and unirritating preparations of vegetables and farinaceous foods in the greatest variety possible.

The entire amount of the fats and carbo-hydrates should depend upon the existing state of the patient's nutrition. In many cases they must be severely restricted, in others liberally allowed. Among the beverages must be mentioned prominently, as especially valuable, milk with its derivatives, sour milk, buttermilk, cream, and sometimes also kefir and kumiss. Many go so far as to insist that the ingestion of one to two liters of milk daily is necessary. One meets less frequently in the therapeutic directions of prominent authors than in practice with long continued, systematic milk cures, requiring three to four liters of milk daily, and with us, indeed, not to an equal extent or frequency as is the case in France.

Alcoholic drinks, as well as tea and coffee, are to be either entirely forbidden or permitted only in small amounts or weak dilutions. Along with these directions come, as a rule, the prescription of some of the weak carbonated alkaline waters in the quantities of one to two cups each day. One has the choice of many springs for this purpose, and which one is selected depends unfortunately more upon the intensity of the pressure with which this or that spring is urged upon public attention than upon any other considerations. Frequently, one might say year by year more frequently, these prescriptions are expanded into regular drink cures at favorite health resorts.

[1] A discourse delivered at the Congress for Internal Medicine, Carlsbad, April, 1899; furnished by the author for publication in the INTERNATIONAL MEDICAL MAGAZINE.

Before I take up the point in this scheme which shall occupy us especially, I would like to interpolate one critical remark concerning the manner in which in practice the regulation of the allowance of albumen is carried out. In accordance with a correct knowledge of the subject, and in full agreement with the leading hand-books and treatises, as well as with the clinical and experimental researches of the last decade, there is in practice relative to chronic contracted kidneys by no means so much stress laid upon the absolute restriction of albuminous food as in the case of acute nephritis and of the severe forms of parenchymatous nephritis. If one estimates that which is permitted in the form of milk, eggs, meats and vegetables, the amount of albumen will be found to be above rather than under 100 grams daily, and in no sense to be considered as small. Much more importance is attached by many to the selection of the kinds of flesh foods, and it has become indeed usual for patients with contracted kidneys to be allowed only the white parts of fish, fowl and calves, while the white meat of swine is regarded with distrust. Red or brown meat, whether of slaughtered animals, or of game, or poultry, is strongly condemned by many physicians. I expressly insist that this rule, in so far as it regards the contracted kidney, has grown up gradually in practice, as a result of frequent repetition, without having been recommended in the writings of prominent authors. This custom has in practice many times developed into an abuse which, in not a few cases, has had injurious results. For many patients who scrupulously comply with this rule acquire in time such a distaste for white meat that their consumption of meat in general becomes restricted to the smallest amount; the proportion of albumen taken sinks more and more, and, because in consequence the appetite in general and the entire consumption of food is lessened, there results a disturbance of nutrition and loss of strength. What particular significance attaches to the prohibition of dark meat is shown by the fact that in such cases, with a return to a varied mixed meat diet, the appetite comes up and the lowered strength is increased.

In the last year and a quarter seven observations of this kind have been made by me. These are from a practical standpoint. But from a scientific point of view I might add the remark that the distinction between the white and dark meats for the nutrition of renal patients has been anything but exactly established, and, at the least, has been greatly exaggerated. I have not found in all literature a single exact clinico-experimental confirmation of it, though there is no lack of hypothetical assertions concerning the greater content in dark meats of substances that are irritating to the kidneys, especially the nitrogen-containing extractives. As regards these last I might, on the other hand, bring forward the fact that our text-books on physiologic chemistry state that the highest creatin values are in the white meat of chickens and rabbits; they exceed in these three or four per thousand, while in the case of beeves, for example, the same values never

reach three per thousand. The essential difference between white and dark meats is in their content of coloring matters, the chemical constitution of which is not yet known with entire exactness, but we have no ground whatever for classing them among the injurious substances.

To the assertion that there is a special harmfulness in dark meats for renal and also for gouty patients, unsupported by clinical or experimental evidence and handed down from one treatise to another, I am able to oppose at least one observation showing that a patient with chronic parenchymatous nephritis, in one five-day period, under the daily use of one-half pound of chicken, excreted exactly the same amount of nitrogen, and even a little more albumin, than in a following five-day period in which, instead of chicken, she received an amount of beef having the same content of nitrogen.

The second far more important question which I would here discuss concerns the allowance of liquids. How shall we regulate this in patients with contracted kidneys?

Eleven years ago H. von Bamberger reported, in a short clinical paper, that in the treatment of certain special cases of disease he had come upon the question whether it were better for patients with chronic Bright's disease to drink much or little. Since there were no observations at hand on this subject, he himself, in the cases of two patients with chronic parenchymatous nephritis, made comparative investigations, in one strongly increasing the customary amount of fluid, and in the other greatly diminishing it. The augmentation of the fluids produced an increase of the diuresis, but left the excretion of urea and albumin practically unchanged. The diminution of the fluids left the general condition undisturbed, but had as a result a lessening of the urea excretion, and, indeed, a small increase of the albuminuria. From this one observation, which speaks against the lessening of the fluids, von Bamberger draws the conclusion that in no form of Bright's disease, not even in the contracted kidney, is there ever an indication for a restriction of liquids; at the best he infers that a severe diarrhea might result.

This view representing von Bamberger is accepted, in part upon his express authority, in nearly all the newer works upon the treatment of chronic kidney diseases. Regarding the contracted kidney, they either say nothing as to the amount of liquids to be allowed, or recommend liberal portions of them for the better flushing of the kidneys. Contrary expressions are met with, but very exceptionally. For example, W. Camerer describes one chronic renal case with edema in which, by a decided restriction of the allowance of fluids, the edema quickly disappeared with a simultaneous increase of diuresis and of the elimination of urea. This was also a case of parenchymatous nephritis, and this observation teaches that from the unfavorable experience of Bamberger one should not generalize. As regards the contracted kidney, I pointed out a year ago, in a discussion of the indications which are afforded by the combination of contracted kidney and

diabetes, that these diabetics find themselves in the long run better off when they are permitted but little liquid. I showed that, by the restriction of fluid, we spare the heart and thereby guard against the most important danger which threatens renal patients, and especially the diabetic with kidney disease, to wit, paralysis of the heart.

In the recently published Hand-Book of Nutritional Therapy (Ernahrungstherapie) Herr von Ziemssen also assumes the same position, as I read with satisfaction. He requires in patients with contracted kidneys a limitation of fluids, especially in those cases in which there are present at the same time distinct signs of arterio-sclerosis.

I have now for some six years been devoting careful study to the question how persons with contracted kidneys fare with a large, and again with a moderate, allowance of fluids, and have to declare, as a result of my observations, that very often patients with contracted kidneys can be extraordinarily helped by a restriction of their consumption of liquids. I will give here a brief resumé only of these observations, the report of the details and of the individual cases being withheld for publication later.

The most favorable, and likewise most striking, effect of the restriction of liquids is seen in the advanced stages of contracted kidneys, in which attacks of cardiac asthma have already appeared and the objective examination reveals, besides hypertrophy of the left ventricle, a considerable dilatation. Digitalis is a sovereign remedy in these conditions, and in fact, it often succeeds in restoring an endurable state until new exacerbations develop.

At ever shortening intervals we have recourse to digitalis and similar medicines, till finally the patients sink into a lasting, severe agonizing condition in the clinical picture of which now the phenomena of chronic heart weakness and again those of chronic uremia predominate.

It is seldom that, after an outbreak of the first threatening appearances of heart failure, the patients survive longer than a few months.

In this stage of the chronic contracted kidney which is ripe for the digitalis treatment with cardiac asthmatic oppression already present, partly in consequence of the preceding attacks of stenocardia and of edema of the lungs, partly from the distinctly recognizable and very considerable dilatation of the heart, the restriction of fluids, even without any other treatment, showed itself decidedly important and conspicuously useful. When, by a conscientious following of the directions, a good result is possible of attainment—and this has hitherto occurred in more than thirty cases—the good effects have shown themselves in a prompt lessening of the at once tormenting and alarming cardiac embarrassment, restoration of good sleep, a profuse diuresis proportional to the amount of fluid taken—similar to that which Oertel in his day related of the thirst cure in heart cases—and above all an indubitable recession of the dilated hearts. The relatively favorable condition to which the patients return after their former threatening experiences

may continue in many of them for a number of months, or even for a year. Naturally, the result was not so favorable with all the patients who were treated by means of a restriction of fluids, for many came under treatment so miserable, and with so many disturbances, that no kind of therapy could be of any real use. But even in these desperate cases I had for the most part the impression that the limitation of liquids produced at least a temporary betterment. Not all of those even who were apparently improved, and for a long time afterward continued better, are still living. The nature of the disease explains this sufficiently. But a sometimes shorter, sometimes longer, period of euphoria and perhaps also a prolongation of life was nevertheless achieved.

Out of the great number of observations I take one, sketching it briefly in order to show the therapeutic results of a restriction of fluids.

One of the earliest observations concerns a gentleman now forty-five years old, who consulted me three and a half years ago. He knew then that he had already had diseased kidneys for at least five years. Until the last months, however, no serious difficulties had appeared. But in the last months he had suffered in increasing measure from difficulty of breathing and a painful pressure feeling in the heart. In the last weeks he awoke every few nights with a strong feeling of oppression and was obliged to remain for hours at a time out of bed. Twice these attacks were accompanied by a frothy, bloody expectoration. The examination revealed, among other things, considerable dilatation of the left heart—even to a point beyond the anterior axillary line—and, as I desire particularly to emphasize, the presence also of retinitis albuminurica. His customary allowance, as ordered by his physician, amounted to between 3½ and 4 liters. Included in this was 1½ liters of milk and 1¼ liters of a mineral water. Incidentally, it may be added that this consisted of Fachinger and Neuenahr water in alternation. My only important prescription in this case consisted in the limitation of the fluids to, at the outside, 1¼ liters daily, and it was left to the patient to choose, within these limits, milk, water, soups or fruit juices, or even occasionally to indulge in a small glass of light wine or beer. The result was that, within a few days, the cardiac dyspnea abated, and up to this time the patient, who, with the fullest activity, oversees a large industrial establishment and still follows conscientiously the directions given at that time, has been free from any steno-cardiac embarrassment. As a curious experience, I have to relate that this patient, having fallen ill with a slight digestive disturbance while away on a journey, received from the physician, who then attended him, the assurance that he would die within a short time unless he returned as soon as possible to a milk diet. I saw the patient last about half a year ago, and found the cardiac apex some two finger-breadths further inward than three years before, and could no longer discover the retinitis which I have previously mentioned. The albuminurica naturally continued in the same old way.

If in the dangerous stages of chronic contracted kidney, that is, when the heart is threatened with paralysis, the restriction of fluids proves itself useful, then there is offered us a reason for employing, even earlier, when the patients are free from embarrassment, the same procedure in a prophylactic way and thereby at least warding off one of the dangers which prepare the way for a fatal result of the disease. In these earlier stages the effects of the restriction are naturally not so striking. The best that can be accomplished then is the preservation of the *status quo*. However, as a result of my numerous observations, I have the impression that even at this time, by means of a restriction of fluids, a positive help can be afforded. Many have attained to a markedly greater capacity for work under a treatment suited to valvular heart disease, consisting of a limitation of fluids, exact quantitative measurement of the foods, systematic physical exercises, and a resort during the summer to the Nauheim or Kissingen baths.

I scarcely need to mention especially that in the earlier stages of the contracted kidney, that is, so long as the kidney disease is well compensated by cardiac hypertrophy, large amounts of liquids, whether taken in the usual daily routine or at spas, produce no immediate apparent harm. This is exactly as it is in the case of heart disease. The prohibition of flooding the system with fluids is at this time of importance only as an assurance against the future. Yet I have had direct proof in a few cases that large unaccustomed amounts of fluids worked immediate injury to patients with contracted kidneys, who, up to that time, had seemed to rejoice in unimpaired cardiac power. One of these was the result of a milk cure of several weeks' duration, the other of an exaggerated and unsuitable mineral water cure in Neuenahr. In both cases the flooding with liquids produced dilatation of the heart and cardiac weakness, of which there had been no signs before.

The former observation concerned a gentleman forty-six years old, in whom the diagnosis of contracted kidneys had been established the previous summer, although no special diet had at that time been prescribed. In the beginning of November there occurred a light and transient apoplectiform attack. In this connection it had been decided in a prominent quarter that there existed no sign whatever of cardiac weakness, and above all no objectively recognizable cardiac dilatation. A diet was ordered for him in which milk and mineral water played a large role, and which comprised in this form alone at least 3½ liters of fluids. When I saw the patient for the first time, three weeks later, a decided dilatation of the left ventricle had developed, the apex beat of the heart was outside the anterior axillary line, and there was a by no means light dyspnea. The patient continued in all respects under the same external conditions. The only essential change in the treatment consisted now in a lessening of the fluids to about 1¼ liters daily. The result was, that after fourteen days only, the apex beat lay

again within the anterior axillary line, and, after fourteen days further, it extended beyond the mammary line one cm. only. Simultaneously, there was a distinct elevation of the cardiac power and of the physical capacity for work.

The second observation concerns a gentleman aged fifty, who had been sent from his home, in England, with a trustworthy diagnosis of contracted kidneys, for the baths and water at Nauheim. From the history, and the accompanying detailed account of his physician, it appeared that the patient, at the time of his departure from home, had had no indications of heart weakness, and likewise no noticeable degree of cardiac dilatation. In Nauheim the somewhat corpulent gentleman led a very quiet, monotonous life, drank much milk and very much spring water—how much may be inferred from the fact that the occasional measurement of the amount of urine showed that it reached nearly to 4 liters daily. His urine had indeed been frequently examined, and it had been determined, with much satisfaction, that the percentage of albumin had been lessened, naturally, since the urine had been largely diluted; but no special attention had yet been given to the heart. When, after the treatment in Nauheim, he consulted me, I made out a marked dilatation of both ventricles, which accorded with a rapid and irregular pulse and dyspneic embarrassment upon the slightest exertion. This dilatation of the heart, which had manifestly developed within a few weeks, receded within fourteen days by degrees, which were almost perceptible from day to day, as the inundation of liquids had been replaced by a strong restriction of the same. I think that these patients with contracted kidneys, when one wishes to send them to health resorts, will obtain much greater advantage from the carbonated baths at Nauheim, Kissingen, etc., and from the other heart-regulating measures there, than when one invokes the very dubious help of the alkaline drinking waters. That these indeed in certain circumstances prove injurious, is shown by the above narrated case.

I must not end this part of my work without pointing out that the restriction of liquids to about 1¼ to 1½ liters in the case of patients with contracted kidneys often involves great difficulties in practice, and technically is much more difficult to carry out than in the cases of cardiac patients, and those suffering from obesity. The feeling of thirst in the former patients has to be contended with much more frequently than with the latter, and there is much greater difficulty with the relatively small amount of fluid to assure the ingestion of a sufficient amount of nourishment. These difficulties are naturally much more readily overcome in sanitariums than in private practice. After overcoming the first obstacles, however, the further progress with restriction of the liquids gives no further special trouble, and although, in all therapeutic questions, experience and observation at the sick bed are of the first importance, I have nevertheless believed it my duty to add a few clinical and experimental investigations. They con-

cern, above all, the determination as to how far the elimination of the products of tissue metamorphosis in the contracted kidney is independent of the ingestion of water. If perchance it should be found that urea, uric acid, the urinary bases and urinary salts are less freely and less perfectly excreted upon a scanty allowance of water than after a flooding of the system with water, then that should serve as a warning, since we do not dare to favor the accumulation of these products in the body generally. In fact, the custom of prescribing for such patients milk and water, and sending them to regular drink cures and renowned springs, has resulted from the notion that a large use of water favors the elimination of the products of tissue changes in every form of nephritis. Up to this time I have made series of examinations in the cases of more than twelve patients, some of which cover a long period of time. The beginnings of these clinical and experimental observations date from a long while ago, and were connected with the investigations over the tissue changes in renal patients which nine years ago were published by myself and our Carlsbad colleague, Ritter. Later these were continued partly by myself, partly by my pupil, Dr. Dapper, of Kissingen, and Herr von Rzetkowsky, of Warsaw, or by my assistants. They shall be published in full later, when a few pertinent special questions have been answered. I have here to communicate, as the entirely justified conclusion, that in the case of patients with contracted kidneys, neither in the stage of relative euphoria, nor in the stage of beginning cardiac weakness, nor indeed in chronic uremic phenomena, is the elimination of the most important products of tissue metamorphosis ever impaired through a lessening of the liquids to about 1¼ liters daily. Not in a single observation was this the case, though in a few instances there was the contrary result, that is, the elimination of nitrogen and urinary salts increased, along with the lessening of the fluids. As concerns the excretion of albumin, the absolute daily amount was not essentially influenced through augmenting or diminishing the allowance of fluids. The percentage of albumin increased only when, with a smaller ingestion of fluids, the amount of the urine fell off. Since in practice the proportion of albumin is exclusively and erroneously considered, it is important to know this fact; otherwise one might be led through a lessening of the liquids to the wrong opinion that the albuminuria had been greatly increased.

Both my clinico-experimental investigations and clinico-therapeutic observations, moreover, extended, not only to contracted kidneys, but also in a larger measure to the chronic parenchymatous nephritis, and indeed to acute nephritis. I must now insist that in both these forms of nephritis it is under certain circumstances of great advantage to the patients to depart from the usual plan of drinking water freely. But I will not enter into this subject further, since these investigations are not yet concluded, and I cannot yet furnish with sharp precision the indications respectively for a generous and for a sparing allowance of water.

GALL-STONES.

BY JOSEPH MCFARLAND, M.D.,

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GALL-STONES are calculi formed, as a rule, in the gall-bladder, but sometimes in the biliary ducts. Their recognition seems to have taken place very early, and it is stated that Hippocrates, Galenus and Aretaeus were all familiar with them, though from reference to their works I have not been able to verify the statement. According to Semmola and Giofreddi, who wrote the paper upon "Diseases of the Liver" for the *Twentieth Century Practice of Medicine,* gall-stones were first observed by Keulmann in 1655. Their relation to the symptoms their presence occasions was not worked out until a half century later.

Etiology.—The occurrence of gall-stones seems to be dependent upon many factors, no single one of which can be regarded as self-sufficient.

Age.—Gall-stones occur most frequently in middle life. Kraus *(Beitrage zur Pathologie und Thérapie der Gallensteinkrankheit,* Berlin, 1891) collected over 2,000 cases, in only five of which were the patients below twenty years of age. Of these five, four were females and one a male.

The following table taken from Kraus will show the frequence of cholelithiasis in both men and women at various ages. It cannot, however, be accepted as an accurate index of cases in general, as Kraus observed cases visiting Carlsbad in search of health and hence commanded only those cases in which the presence of calculi had given rise to symptoms, and whose financial condition enabled them to visit a health resort.

Years.....	20–30	30–40	40–50	50–60	60–70	70 +	Totals.
Men.....	15	110	321	231	52	6	735
Women....	98	444	565	303	87	17	1,514
						Grand total.....	2,249

Gall-stones have rarely been found in the gall-bladders of new-born infants, and in young children. They are also sometimes found in the very aged. Charcot found them present in one-third of all the old women whose bodies were examined at the Salpetriere.

They probably exist in an immense number of cases in whom no symptoms ever direct attention to them. The statistics of Kraus, therefore, are rather more useful as indicative of the time when they are apt to call attention to themselves, rather than the time when they really exist. As the result of pathologic observation, it might safely be stated that the frequence of gall-stones increases with each year of life. As illustrating this fact, the statistics of Schroeder may be more useful than those of Kraus.

Age	Necropsies	Gall-stones	Percentage of cases
0-20	82	2	2.4
21-30	188	6	3.2
31-40	209	24	11.5
41-50	252	28	11.1
51-60	161	16	9.9
61+	258	65	25.2

Of the above 4.4 per cent. were men and 20.6 per cent. women.

Of 1,000 cases collected by Harley, 10 occurred before the twentieth year, 40 between the twentieth and thirtieth years, 200 between the thirtieth and fortieth years, and 750 in cases over forty years of age.

Sex.—Cholelithiasis is far more frequent in women than in men. This is amply shown by reference to both of the statistical tables given above. In the table of Kraus there are two women to one man, while Schroeder's autopsies show five women to one man.

Of 4,300 necropsies performed at the Stadt-Krankenhaus in Dresden, between 1853 and 1869, gall-stones were observed 270 times, or in 7 per cent. of all cases. Of these cases the relative percentage of males to females was 4: 9.6.

Bollinger found gall-stones in 25 per cent. of all women over sixty years of age, and Charcot in 33.3 per cent. of the old women of the Salpetriere.

Of 620 cases collected by Stein 337 (61 per cent.) were in women and 243 (39 per cent.) in men.

As predisposing causes to biliary lithiasis in women, may be mentioned:

1. Pregnancy.—Frequent pregnancy seems to favor the formation of gall-stones.

2. Unhygienic Clothing.—The corset seems to play an important role by producing prolapse of the liver and altering its shape so that the bile cannot escape readily. Bollinger found "corset liver" in 40 per cent. of women with gall-stones.

3. Habit—Most women of the better classes lead sedentary lives without sufficient exercise to aid in the combustion and elimination of waste products. As cholesterin is one of these, such habits are supposed to predispose to its accumulation in the body.

Heredity.—Family predisposition to cholelithiasis certainly occurs. As, however, together with what might be regarded as predisposition there goes, in many cases, a general tendency to luxurious living, heavy diet, sedentary habits, professional occupation, and other causes, themselves factors of no mean importance, one must be somewhat cautious as to the exact importance to be attached to the family predisposition by itself.

In general, it may be said that the "arthritic diathesis" or lithemia is the inherited body habit most frequently associated with gall-stones.

Occupation.—Kraus observed that fifty per cent. of the cases in which

men were afflicted with gall-stones came from professional and clerical men. Remembering that gall-stones are most frequent among women, and men of the professional class, it seems proper to conclude that the occupations most predisposing to their formation will be those associated with sedentary, inactive life, intense nervous application, full diet and excessive nutrition. Biliary calculi are much more frequent among the rich than among the poorer classes seen in hospital service.

Diet.—Inasmuch as gall-stones are more frequent in the lithemic habit than among other persons, and occur more frequently among the rich than among the poor, it is commonly supposed that the conditions of hypernutrition and accumulation of waste products are predisposing to gall-stones. It is rather generally admitted that the increased frequency of gall-stones toward southern and tropical climates depends, in large measure, upon the diminished proportion of fatty animal matter consumed.

It is also noted clinically that the patients who suffer from gall-stones have a particular fondness for fat-producing foods, such as starchy, saccharin and fatty articles.

Many writers cling tenaciously to the theory that fats are necessarily associated with cholesterin formation, though Thadichum and others have shown that cholesterin is an alcohol and has nothing to do with it; and still other writers find it derived solely from the epithelial cells of the gall-bladder.

Frerichs regards irregularity in the taking of meals as an important factor, because of the increased length of time the bile is retained in the gall-bladder.

Constipation.—Constipation is frequently associated with cholelithiasis, but whether as an etiological factor or not, it is difficult to say. Absence of bile from the intestine favors constipation, and in gall-stones the irregularity of bile supply occasioned by intermittent obstruction may act by lessening the peristaltic action. On the other hand, in constipation the absorption of decomposition products from the intestine by the blood circulating in its capillaries may throw a considerable quantity of effete matter into the liver, the elimination of which is attended with an alteration of the bile which predisposes to the formation of calculus.

Nervous Diseases.—In the Colney Hatch Asylum for the Insane it is said that gall-stones are found in 36 per cent. of all cases. Cholesterin is more abundant in nervous tissue than anywhere in the body, and may be liberated where it is diseased and destroyed.

Miscellaneous.—Violent emotions, waste of nervous energy, chronic diseases, typhoid fever, and obstructions of the gall-ducts by inflammatory or neoplastic developments predispose to gall-stones. Cholecystitis and carcinoma are marked predisposing causes. Indeed, carcinoma of the gall-bladder and ducts is almost invariably associated with calculus.

Climatology of Gall-Stones.—There seems to be little doubt but

that climatic or geographical influences affect gall-stones, though exactly in what manner they operate is difficult to determine. German statistics show the calculi to be more frequent in and about Hanover than elsewhere in the Empire. According to Eichhorst, gall-stones are also exceptionally frequent in the neighborhood of Göttingen. It is said that they abound in Sweden and Hungary and are rare in Holland and Finland. According to Hurley, gall-stones are very frequent and of large size in Russia, probably because of the fatty diet consumed there. In general, it seems to be true that cholelithiasis is much more frequent in northern latitudes than toward the tropics, and in countries where abscess of the liver is a frequent disease, gall-stones are nearly unknown.

All attempts to refer the formation of gall-stones to peculiarities of the diet, or of the water of the regions in which they are common, have thus far yielded no satisfactory results.

Frequency of Occurrence.—That gall-stones are of more frequent occurrence than one would suppose from clinical evidence, is shown by reference to the statistics of some of the large hospitals where the subject has been investigated. In the Dresdener Stadt-Krankenhaus, as has already been mentioned, of 4,300 necropsies, gall-stones were found 270 times, or in 7 per cent. of all the cases.

Bollinger states that they occur in 7 per cent. of all cadavers. In 2,028 necropsies Roth found gall-stones 166 times, or 8 per cent. In 4,300 necropsies of Fiedler's collecting, gall-stones were present in 270, or in 7 per cent. Paulsen found that in Denmark gall-stones seemed to be present in only about 3.78 per cent. of all dead bodies examined. Of 2,520 necropsies at the Pathological Institute of Basle, there were 255 cases of cholelithiasis—almost 10 per cent.

Morphology and General Characteristics.

Number.—Gall-stones may be single or multiple in their occurrence and will vary in appearance according to their size and number. It is probably more common to observe several than a single calculus. There are often large numbers, and the extent to which their numbers may increase is at times most extraordinary. Morgogin has recorded a case in whose gall-bladder there were 3,000 calculi, Naunyn one with 5,000, and Otto counted 7,802 in a case, specimens from which are now in the museum of Breslau. Chopart saw a liver in which the intrahepatic bile ducts were so filled with biliary calculi that the organ was with difficulty incised.

Size.—The size varies with the number. Sometimes instead of forming distinct calculi the salts precipitate in the form of fine powder—"bile sand" or "biliary gravel." When there are many stones they are all apt to be small. When few, the stones may be quite large; when single they are largest. Enormous stones are sometimes seen, probably the largest single

stone on record being one found by Merkel, and described by Von Schüppel, which is said to have measured[1] 6x2.5 inches. Very heavy stones are recorded by v. Frerichs, who found one weighing 120 grams, and by Ritter, who secured one of 135 grams weight.

Shape.—The large single stones usually correspond in shape to the interior of the gall-bladder, and form oval or elliptical masses. Several large stones may conjointly form a mass exactly conforming to the interior of the gall-bladder. An excellent illustration of this is shown in the series of enormous stones seen in the illustration accompanying this paper. These stones

FIG. 1. LARGE CALCULI, CHIEFLY CHOLESTERIN, WITH SOME ADMIXTURE OF BILE SALTS (NATURAL SIZE).

were removed from the gall-bladder of an old woman, by Coroner's Physician Mattern. So far as can be determined, their existence was never suspected during life, no symptoms ever having resulted from their presence.

The surfaces of gall-stones may be smooth and polished, may be rough and irregular, or may be nodular like the surface of a mulberry. When there are several large stones, their approximated surfaces are usually flattened so that they present "facets." These may look very much like articulations, and are often polished as if by friction. It is quite possible that in the movements of the body, when the gall-bladder is disturbed, these facetted surfaces glide over one another, but that the facets result from such friction is highly improbable. The number of facets will vary with the number of stones, and the shape of the stone with the number of facetted surfaces which it presents to neighboring stones, so that it is common to find quadrangular, triangular and polygonal surfaces upon

[1] Length, 15 cm.; circumference, 12 cm.

stones with cubical or most polyhedral shape. When there are many very small stones, the facetting may or may not be marked. Single small stones are usually spherical or ovoid. The occurrence of a single stone with facets upon its surface usually indicates that others have been present but have escaped into the intestine.

Calculi formed within the biliary ducts may be cylindrical. Occasionally the intra-hepatic stones may be branched in conformity with the tubes in which they are found, rarely they are hollow cylinders with a central lumen.

Color.—The color will vary with the composition of the stone. As a rule, they are yellowish or brownish. They may be gray or white, or almost black. Rarely blue gall-stones have been observed.

Consistence.—Like the color, the consistence of the stone will depend in large measure upon its chemical composition. Some of the stones are soft and almost pulpy when fresh, and easily crushed between the fingers. Others are firm and crumbling when pressed. The crystalline stones are usually friable.

Specific Gravity.—The specific gravity of gall-stones is always heavier than water when fresh. When old and dry they often float upon the surface of water, probably because of air contained in their interstices. Bley found the specific gravity of a calculus which he investigated to be 1,580; Batillat that of another which he studied 1,966, so that there are considerable variations probably dependent upon the chemical composition of the calculus.

Structure.—When sections of gall-stones are made, it is usual to find that they have formed about one or more nuclei. Various entities, such as fragments of parasites, blood-clots, zooglea masses of bacteria may be found. Remarkable foreign bodies entering the gall-bladder sometimes form the foundation of a calculus; thus Bouisson found a needle in one; Förster a plum-stone; v. Frerichs a plum-stone that had entered the gall-bladder through a fistulous communication with the stomach; and v. Frerichs also observed metallic quicksilver in a stone that he examined.

Usually, each stone has a single nucleus, but there may be two or more, five having been counted in one large stone. The stones form about the nuclei by a process of lamination, the appearances of the large stones with multiple nuclei indicating that they originate from several smaller stones.

The lamina making up the calculus may be regularly deposited and of similar nature, but it is rather more usual for them to vary, at one time consisting of entirely different chemical substances from those seen before. The lamina are not of uniform thickness and are not regularly deposited, so that it is usual for the nucleus to occupy an excentric position within the calculus. Some stones, as those which consist of pure cholesterin, are not laminated, but are made up of crystals which show a beautiful radiated structure.

Because of the difference in organization and formation, some writers —Semmola and Giofreddi—divide them into the *homogeneous,* which are of similar structure throughout, and the *mixed,* which are laminated, forming about some nucleus. The commonest gall-stones are mixed, the more rare stones homogeneous.

It is customary to divide the structure into nucleus, body and rind. When several calculi are simultaneously present in the gall-bladder, they are of the same composition. In rare cases, in which the stones may be found at periods remote from one another, their chemistry may be dissimilar. Stones occasionally have an eroded or cavernous surface, which has suggested to many that they may be in process of solution. Ex-

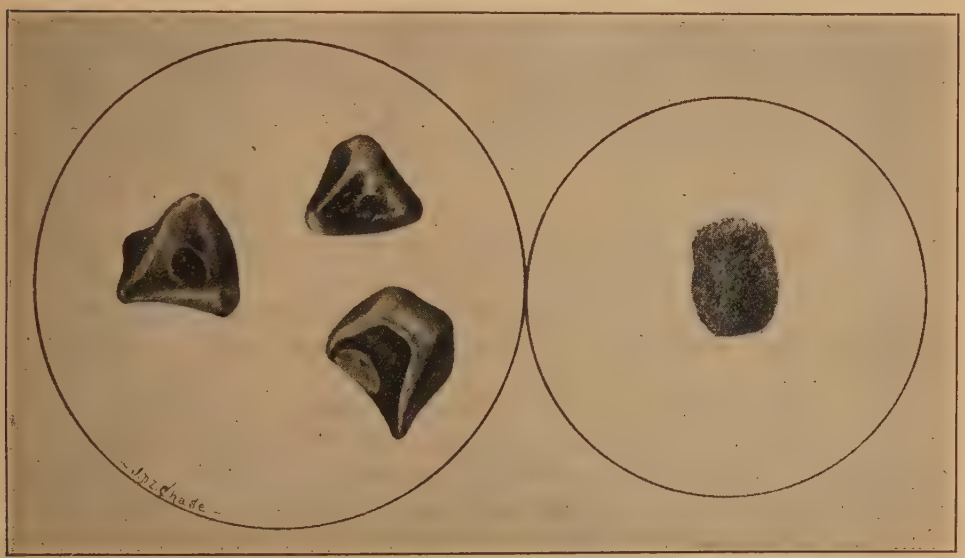

FIG. 2. COMMON GALL-STONES, SHOWING FACETS. FIG. 3. PURE BILE PIGMENT CALCULUS.

actly what the appearance may depend upon is not known. Schüppel believes that it is due to the activity of bacteria. Bartholow believes that calculi disintegrate in the gall-bladder at times, because of the movements of the body, which crumble their surface and edges, and because of the solvent action of the alkaline bile upon cholesterin.

VARIETIES AND COMPOSITION.

1. *The Common Gall-stone—Cholesterin-Bilirubinate of Calcium Calculus.* This is the most frequent calculus. It is usually about the size of a pea, but may be as large as a cherry. It is rounded when single or facetted when in numbers. Its color is usually yellowish, brownish, greenish, or even so dark as to be brownish-black. The surface is usually, if not invariably, smooth. The structure is laminated, the lamina being of different colors as a rule. Their consistence is usually rather soft, and may be

quite plastic. Sometimes they easily crumble between the fingers. They shrink in drying and very often present superficial cracks from contraction of the outer layer. Bartholow (Copper's System of Medicine, II., 1,059) speaks of these calculi as inspissated bile.

According to the analysis of Ritter, these stones consist of 70.6 per cent. of cholesterin, 22.9 per cent. of organic, and 6.5 per cent. of inorganic constituents. A complete analysis of gall-stones, made by Ritter, is as follows:

Cholesterin	0.4
Bilirubin and bilifucin	0.6
Biliprasin	0.8
Bilihumin	12.8
Biliary substance soluble in water	2.3
Carbonate of lime	64.6
Phosphate of lime	12.3
Ammonia-magnesic phosphate	3.4
Mucus and loss	2.8
	100.0

In addition to these ingredients found by Ritter, other chemical studies have demonstrated the presence of biliary acids, fatty acids, manganate of lime, calcium sulphate, carbonate of magnesium, sodium chlorid, traces of iron, copper, manganese and uric acid. Epithelium is often a component of the calculi.

2. *The Cholesterin Calculus.* This is of rather frequent occurrence, and of somewhat variable composition, so that it is well to speak of laminated cholesterin calculi and *pure cholesterin calculi.*

The stones are usually found within the gall-bladder.

(*a*) *Laminated cholesterin calculi* are usually of a rather translucent appearance when fresh and moist, and have a whitish, yellowish, greenish, brownish, or even blackish color, according to the degree of admixture of cholesterin and bile-pigments present. The stones may be multiple and facetted. The surfaces are usually smooth. They are friable in consistence. When cut or broken, it is usually found that a beautiful radiating crystalline centre is surrounded by a rind-like layer of non-crystalline salts in one or several layers. A central pigmented nucleus is sometimes present. Admixture with unusual salts sometimes makes the stones unusual in appearance, so that, as in the case of a combination with considerable carbonate of calcium, they may be chalky.

The percentage of cholesterin in these stones is usually over 90 per cent.

(*b*) *Pure cholesterin calculi,* containing as high as 98 per cent. of cholesterin, are rare. They usually occupy the gall-bladder and form ovoid or egg-shaped stones as large as a pigeon's egg. They are usually single, though occasionally two or three occur at the same time. When

fresh and moist, they may appear transparent. The color is usually creamy, pale yellow or amber. The surface is rough, as a rule. The roughness of the surface may be simple grittiness, or may depend upon mulberry-like nodulations formed in the process of crystallization. The surface may be smooth. The fractured surface shows no lamination, but is homogeneous and beautifully crystalline. Eichhorst compares it to gum camphor, asbestos, or white marble. There may be a central dark nucleus from which the crystalline structure radiates. The specific gravity is light. The stones can be cut readily. Calculi composed of cholesterin are inflammable and burn with a bright flame.

3. *Bilirubin Calculus.* Bilirubin, biliverdin and combinations of these pigments with calcium carbonate form stones of rather infrequent occurrence.

(*a*) *Bilirubinate of calcium* with some added substance forms stones which are usually of rather small size, rarely larger than a marble. There may be a single one or several. They are commonly facetted. The characteristic color is rust color, varying to brownish-black. On section they are laminated, all the lamina having a dark brown or reddish color. They contract, crack, and often shed their outer layer when dried. There is usually cholesterin in the outer layer, and the central nucleus may be crystalline. Murphy (*Twentieth Century Practice of Medicine,* Vol. IX., p. 740) says: "Twenty-five per cent. of the outer layer is cholesterin, the remainder being principally bilirubin and bilirubinate of copper, with a small trace of iron."

(*b*) *Pure bile-pigment calculi—bilirubin calculus*—is much less frequent than either the cholesterin bilirubinate of calcium, or the bilirubinate of calcium stones. These stones are never large, according to Murphy, and may be found in the form of fine sand, or stones about the size of a pea. They may be rust colored, greenish or blackish. Some of these stones are rough on the surface, or mulberry-like. They usually crush readily, and when dried shrink, and may crumble away. They are often soft when fresh. This calculus is most frequent in the intra-hepatic ducts.

4. *The Calcium Carbonate Calculus.* This form of biliary calculus is quite rare. It consists chiefly or exclusively of calcium carbonate. It usually has a whitish or grayish color, a chalky appearance, and is heavy and hard. The broken appearance is like chalk. The stones of this class may be very large and are not infrequently associated with carcinoma.

Factors Involved in the Formation of Gall-stones.

1. *The Bile.* The chemical substances which enter into the formation of the gall-stones are all normal constituents of the bile, though sometimes in such small amounts as to make it questionable just how it is possible for them to collect in amounts necessary to form calculi.

(*a*) Cholesterin occurs in very small amounts in the bile, but is always

present. The percentage in normal bile, according to the analysis of Hammersten, varies from .063 to .096. These variations occur in health irrespective of diet. The cholesterin is supposed to be a waste product of metabolism on its way to excretion. It forms part of the composition of the various tissues, especially of the nervous system, and is supposed to be held in solution in the bile by the bile salts. The sodium salts (glycocholate and taurocholate of sodium) may have something to do with it, and there has been noticed a tendency for cholesterin to be precipitated when these salts are defective. Cholesterin is also precipitated if from any cause the bile becomes acid.

Murphy follows Naunyn's views in his paper *(Twentieth Century Practice of Medicine,* Vol. IX.) and insists upon it that the cholesterin which enters into the formation of gall-stones has nothing to do with the bile, but is derived from the epithelial cells of the gall-bladder, which, in all cases of calculus, are destroyed in large numbers. This view may be correct. The precipitation of cholesterin is greatly increased by the presence of a cholesterin calculus in the gall-bladder. Murphy supports his view of the epithelial origin of the cholesterin by pointing out that when the gall-bladder is shut off from communication with the ducts and no bile enters it, the formation and precipitation of cholesterin goes on uninterruptedly.

(*b*) Bile-pigments. Like the cholesterin, the actual percentage of these substances in the bile is, in spite of the intense color they impart to the fluid, small. Referring again to the analysis of Hammersten, we find them present in .81-.91 per cent. The occurrence of calculi composed of the bile salts and pigments is thought to signify nothing more than that there has been stasis and precipitation. The bile pigments, especially bilirubin, are soluble in alkalies, and are precipitated by acids, so that the same condition that predisposed to the precipitation of the cholesterin will also predispose to precipitation of the bile pigments.

(*c*) Calcium carbonate occurs in the bile in very small amounts, so that it is extremely improbable that the calculi of this composition are formed solely by its precipitation. Especially is this true as the presence of considerable calcium carbonate in the food or drink does not increase the quantity excreted by the bile. The most recent researches seem clearly to prove that the calcium salts are divided from the mucin which occurs in abundance in inflammation of the gall-bladder. From the description of the calcium carbonate stones already given, it will be remembered that they are nearly always homogeneous calculi without laminations. This condition is readily understood from the fact that the presence of lime in the bile prevents, to some extent, the precipitation of the pigments and their salts. In excess the calcium salts probably favor the precipitation of the bile pigments.

The original idea that the formation of gall-stones depends upon in-

spissation of the bile has long since been abandoned, as it is clear from their varied and complex structure that more complicated processes are involved. There can be no doubt, however, but that stagnation of the bile greatly facilitates the process. Naunyn says, the formation of calculi depends essentially upon (1) alteration of the mucous membrane, with desquamation and destruction of epithelium and outpouring of mucus; (2) stagnation of bile in the passages permitting the precipitation of its constituents.

2. *The Mucous Membrane.* Mention of the probable importance of the mucous membrane has already been made in speaking of the possible epithelial origin of cholesterin and the mucous origin of calcium. In nearly all cases of gall-stones there is found a more or less marked catarrhal inflammation which may be in part secondary to the presence of the stone, and in part contributory to it. That disease of the mucous membrane has much to do with calculus formation no one who has studied the question can doubt. It is, however, improbable that it is as important a factor as the condition of the bile and the presence of foreign entities.

3. *Foreign Bodies.* Gall-stones, like other calculi, sometimes form about foreign bodies as nuclei. A number of these have already been mentioned—fragments of parasites, needles, plum-stones, etc. Foreign bodies intentionally introduced into the gall-bladder by Lanes invariably failed to produce calculi, even though they altered the reaction and composition of the bile. Mayer also had similar results. Both used dogs for their experiments, which was unfortunate, as dogs do not have gall-stones. Even in relation to foreign bodies it may be possible that some alteration in the condition of the bile must necessarily precede calculus formation.

4. *Bacteria.* Bacteria have been found in calculi by Gilbert and Dominici, and led to numerous experiments, in which cultures were injected into the gall-bladder. The common result of these experiments was failure. Naunyn lays great stress upon the bacillus coli communis in exciting inflammatory changes in the walls of the gall-bladder and so predisposing to the formation of stones. The length of time during which the typhoid bacillus may remain viable in the gall-bladder is remarkable, and well known. During its residence mild irritation probably results, which favors subsequent calculus formation. Welch has reported a case in which the bacterium coli communis was found in the centre of a gall-stone. Osler has dwelt upon the effect of the typhoid bacillus upon the gall-bladder, in which it produces a catarrhal inflammation predisposing to gall-stone formation.

The Mechanism of the Formation of Gall-stones.

When the conditions favorable to the formation of gall-stones occur, there collects within the gall-bladder an indefinite mass of inflammatory products comprising mucus, desquamated epithelium, zooglea masses of bacteria, etc., upon which the bile salts precipitate. This forms the nucleus

of the later calculus, and consists in part of substances which will later be removed. As time goes on, the biliary pigments are deposited layer after layer upon this, until a calculus is formed. Thus far the formation of the stone is simple enough. The addition of cholesterin is considerably later, and is a slow infiltration process, the substance crystallizing in the interstices of the stone as the organic products are dissolved out. Cholesterin may also replace the bile pigment compounds when they yield to subsequent solution. As the calculus becomes larger, and the damage done to the wall of the gall-bladder is greater, more cholesterin seems to be formed by the lining epithelium, which is deposited as an incrusting layer upon the surface of the calculus. Lamina after lamina is successively deposited according to the variety and size of the calculus.

From a number of suitable nuclei, a number of calculi may form, there seeming to be no other limit to the possible number than the capacity of the gall-bladder to retain them. The stones are at first all inclined to assume a spherical form, but as they enlarge and come in contact with one another, the successive lamina are either deposited upon adjacent stones, combining them and making from several small stones one large one, or the further deposition of the component salts will take place upon the surfaces not in contact, filling out the interspaces and so producing the peculiar shaped stones so often seen. The facets upon the calculi at the surfaces of contact are only in rare cases the result of friction. I believe that in the calculus mass shown in the first illustration there was occasional friction between the articulating surfaces. The common polygonal stones are not the result of pressure or friction, but originate as round stones, which do not fit well together but have gaps between them which are subsequently filled in by additional growth of the stones until they are in almost complete contact over their entire surfaces, opposing one another by surfaces curved and flattened so as to accommodate themselves perfectly to their environment.

Prevention of Gonorrheal Infection. Dr. Monroe advises the following method of preventing gonorrhea: The patient is ordered to urinate immediately after coitus and wash his genitals with tar soap and water. Then inject 3i of a solution of permanganate of potash (3i to f3vi of water) and immediately allow it to pass out; then another 3i injected and retained for about a minute by closing the meatus with the thumb and finger. A small piece of cotton is saturated with the medicine, and the penis and scrotum washed, allowing them to dry without the use of towel. The results are claimed to be very satisfactory.

SOME PRACTICAL USES FOR ELECTROLYSIS.[1]

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Electrolysis is a process of destruction or disintegration of organized tissues or fluids of the body, or the separation of chemical compounds by electricity. I wish to speak particularly of the use of the electric needle and bougie. The *negative* electrode or pole of the battery is the one used for destructive purposes (electrolysis), while the positive electrode or pole is sedative in character. The galvanic, constant, or silent battery is the one used. While not absolutely essential, the best and most satisfactory results are obtained by the use of a milliampere meter—an instrument to measure the exact strength of current. Any make of galvanic battery may be used.

The electric needle may be made of platinum, steel, or composition metal—in fact I once used a fine steel sewing needle. Always use the platinum needle, as it is pliable; cannot break off in the tissues as a steel needle may do if your patient moves suddenly, and is best adapted for carriage in your case. Should you accidentally (not excusable) connect your positive pole to the needle of steel or composition, there will be a black or rusty oxid of iron deposited in the tissue as permanent as a tattoo mark. Always be sure of two things: First, connect your needle or electrode with the negative pole of the battery, and be sure you are right; second, see that your needle is clean and aseptic. Select a short, uncomplicated needle holder that can be easily held in the fingers, as a pen holder would be. Some prefer a holder which has combined with it an automatic button for making and breaking the current. As this requires an extra motion with the hand, I find it objectionable, and often very inconvenient. My preference is for a plain holder, and the current is made or broken by the patient grasping the positive electrode with either hand and releasing it as indicated by the operator. Among the more important uses for the electrolytic needle are the removal of superfluous hairs, moles, warts, birthmarks, small tumors, enlarged veins, small aneurysms, etc.

Superfluous hairs must be removed one at a time. Insert the needle carefully into the hair channel until it pierces the bulb or bottom of the hair follicle. This is indicated by a peculiar resistance at first, followed by a slight sensation of freedom of the needle point that is so characteristic that it must be practiced to be appreciated. Always introduce the needle

[1] President's address before the Atlantic County (N. J.) Medical Society, February 8, 1899.

with an open or unclosed current. When the hair follicle is pierced the current is closed, and in about two to six seconds a small bubble or two is seen about the needle. This usually suffices to destroy the hair root. Always break the current before withdrawing the needle. If you do not, your patient will experience an unpleasant shock or stinging pain. If you have been successful, the hair will come out readily without feeling to the patient. If you are compelled to use traction, the hair follicle is not destroyed and the hair will return. The strength of current used should be from three to six milliamperes, or about the strength obtained from one or two of the small bichromate battery cells. Never remove two hairs at one sitting that are closely approximated, but select them at least one-quarter to one-half inch apart, this to prevent too much local irritation. I have removed two black beards from ladies, two moustaches, hairs from moles, and in other parts, and none have returned. You can remove from ten to seventy-five hairs at a sitting, according to your patient. Bathe the face afterwards with hot water and apply a soothing unguent. A current of ten to twenty milliamperes will destroy surrounding tissue and leave white scars, while the lighter current will leave none. Moles are removed by piercing the base on several sides and using a current of from ten to fifteen milliamperes, or even weaker currents will often suffice. The change of color will indicate your success or failure. Too strong currents will leave scars. Warts and small tumors are removed the same as moles.

Birth-marks are dependent upon enlarged capillary vessels and, if not too large, can be readily removed by introducing the negative electrode needle into the layer of tissue containing these vessels. If four to six milliamperes of current are used, the vessels surrounding the needle are contracted and destroyed and, with the following contraction of the scar tissue formed, will be permanently effaced. Small areas must be treated at each sitting until the result is accomplished. Enlarged veins of the face, nose or ears may be removed by introducing the needle into the caliber of the vein as far as it can be seen, and, with a current of four to six milliamperes, gradually withdraw the needle and a small white line is left, without the least blood. In a day or two this line disappears, and no trace of the vein is left. The so-called whiskey nose can be "done over" by this method.

A few words only on the use of the bougie. The olive-tipped metallic bougie is probably best, and the stem should be covered with hard rubber. Urethral strictures can be permanently cured by electrolysis and without the use of large sounds. A stricture is composed of scar tissue. Scar tissue is readily disintegrated by negative electrolysis, while healthy tissue will not disintegrate with the same strength of current. Test the caliber of the stricture first, and use the electrode slightly larger than will ordinarily pass. If it is impermeable, use your smallest electrode. Remember that mechanical force must not be used. Introduce the aseptic

electrode, anointed with glycerin as an emollient, until the olive tip is in contact with the stricture. Place the positive pole over the pubes or on the perineum. With a rheostat or current controller gradually turn on the current until five to six or eight milliamperes are registered. Another guide is to go by the feelings of the patient. If there is too much pain or burning, your current is too strong. Use only the mildest pressure on the bougie electrode and in almost every case it will slip past the stricture in from two to eight minutes. When the current is broken and the instrument withdrawn, you will find the back of the olive tip covered with a frothy substance which is part of the disintegrated scar tissue and the fluids present in the urethra. Never prolong a treatment over ten to twelve minutes. Give treatments every third or fourth day and use a larger electrode each time until the urethral caliber is normal, which will require from six to ten treatments. Contrary to some recent reports published, ten to fifteen milliamperes will cause severe pain; will destroy too much tissue at one time; will be liable to produce more scar tissue in healing; and can be likened only to division with large bougies. With weak currents your patient should experience no discomfort and should be able to leave your office at once for his business pursuits. No injections are necessary. Spasmodic strictures will relax at once or within one or two minutes under this method. Bloody discharges should never follow a treatment. Chronic gleety discharges, due to ulcerated patches or small scars in the urethra, can be cured entirely in many, if not all, cases, as many of my cases show. Prostatic conditions can also be reached in like manner. Electrolysis is also used in treating stricture of the lachrymal duct, esophagus and rectum.

Do not expect too much from electrolysis, and do not condemn it because you have failed to be successful in every case. Some things can be done definitely by what we might call mathematical rule, but in doing them certain technique must be followed strictly or failures will positively result.

Local Anesthesia in Major Operations. Dr. Suslow, of Kieff, employs local anesthesia, even in such operations as excision of cancer of the lip, skin-grafting by Thiersh's method, amputation of the finger, radical cure for hydrocele, Bassini's operation for hernia, removal of cervical glands, of cicatricial tissue from the vagina, excision of a rib, etc. The anesthesia is produced by hypodermic and intradermic injections of ½% warm solution of hydrochlorate of cocain, preceded in some cases by a hypodermic of 0.008 grm. of morphine ¼ of an hour before the operation. When operating on the extremities, an Esmarch bandage is applied. The injections are made along the line of incision, anesthesia manifesting itself in 3 to 5 minutes.

TALKS TO GENERAL PRACTITIONERS.

TREATMENT OF GONORRHEA IN WOMEN.

BY J. D. THOMAS, M.D.,

Professor of Genito-Urinary Diseases, Western Pennsylvania Medical College; Genito-Urinary Surgeon to the South Side Hospital, Pittsburg, etc.

In the treatment of gonorrhea in the female, the general principles are the same as those followed in the male, although the technique is different. In the male the urethra and its mucous continuations require treatment; while in the female we have in addition the vulva, vagina, cervix, and the various openings which lead from these. We will first consider the urethra.

As the most prominent symptom is the burning on urination, with a frequent desire, to relieve these an alkali should be administered. From ½ to 1 drachm of bicarbonate of soda may be administered every four hours, until the urine is neutralized, after which a sufficient amount, only, is given to keep the urine in this condition. In lieu of the soda, acetate of potash in half-drachm doses may be given. In addition to the above, extract of hyoscyamus may be given in two-grain doses every three hours, or of the tincture one drachm. The small doses usually recommended by the books are useless. After the ardor urinae has passed off, salol, in five-grain doses, may be prescribed every four hours. Other remedies are oil of sandalwood, copaiba, and urotropin.

Local treatment to the urethra is not always required, nor necessary. The urethra being a short canal, and frequently flushed by the urine, it often recovers before the cervix, glands of Bartholin, etc., are well. The passage of urine in two glasses will usually indicate whether the urethra has recovered or not. If recovery does not take place with the treatment outlined above, then local applications are resorted to, as in the male. To prevent the solution from entering the bladder, when being injected into the urethra, pressure should be made with the finger at the meatus internus. Instead of injections into the urethra I sometimes substitute direct treatment by the use of absorbent cotton wrapped on a probe. The cotton may be moistened with a solution of carbolic acid, one per cent.; nitrate of silver, five per cent., or with any other solution indicated. One of the short urethral tubes used

in the treatment of the male may be utilized. After the tube is introduced it may be slowly withdrawn and the solution on the cotton applied as the walls of the urethra fall together.

In those exceptional cases where the vulva is principally involved, such as we find in children and in virgins of older years, it is necessary to put them to bed, until the more acute symptoms subside, which they soon do under applications of hot boric acid solution. The treatment of the vagina and cervix must be conducted by irrigation methods, and can usually be carried out by the patient when properly instructed. Two quarts or more of the solution should be used three times a day. Permanganate of potassium, $^1/_{3000}$, or bichlorid of mercury, $^1/_{4000}$, are the best. If an astringent is desired, the following may be used:

℞ Zinci sulph. (vel. sulphocarb.), ...
Alum sulph., ... aa. ℥i
Cupri sulph., ...
Ferri sulph., ... aa. ℥ii
M. S. A teaspoonful to the pint of water.

A cleanly and convenient method is to have the patient arrange her fountain syringe, with the solution (preferably hot), at the proper height, then take an ordinary chair and tilt it *forward* on the seat of another chair. On the *seat* of this *other chair* a pillow may be placed for her head to rest upon. After everything is arranged, the patient lies down with her clothing drawn up out of the way, her limbs flexed, and outside of the legs of the chair, when the vaginal end of the tube is introduced, the solution allowed to flow into the vagina and it is then received in the pan, which is under the buttocks of the patient and within the legs of the chair.

A local application of nitrate of silver, twenty to fifty grams to the ounce, is to be made by the physician twice a week. This application may be made through a Ferguson speculum. After the introduction of the speculum, and a thorough cleaning of the os and cervix, about a drachm of the silver solution is poured down the speculum, when the os and cervix are bathed with the solution. As the speculum is withdrawn, the medicine comes in contact with the vaginal walls and they are thoroughly bathed. If the cervical canal is involved, this can be treated with tincture of iodin and carbolic acid, equal parts, the application being made with a cottoned probe. If the discharge persists from a lack of tone, which is sometimes the case, a large amount of boric acid may be packed around the cervix and held in place with a tampon. This is an excellent drying powder.

When the vulva-vaginal gland becomes involved, it is better to destroy the gland, for it is difficult to cure in any other manner. It should be opened from top to bottom, cleansed with peroxid of hydrogen, thoroughly curetted and finally packed with iodoform gauze. In chronic cases it is well to dissect out the entire gland.

TREATMENT OF CHRONIC ENDOMETRITIS.

BY E. E. MONTGOMERY, M.D.,

Professor of Gynecology, Jefferson Medical College.

No subject in gynecology has been prolific of greater discussion than the one now under consideration, nor is there any disease of the genital tract more worthy of our earnest study. By extension of inflammation from the endometrium, we have involvement of the contiguous structures—the parenchymatous tissue of the uterus and its peritoneal covering; but still more serious in its results is the spread upon the continuous tissue, that of the mucous membrane by which the tubes are involved, and finally the peritoneum.

Notwithstanding the recognition of the endometrium as an avenue for the extension of infection to the deeper structures, there are those who deny the existence of endometritis. The symptoms generally attributed to this disease are by one school assigned to inflammation and consequent exudate in the cellular tissue which, by obstructing the circulation in the uterus, causes passive congestion and increased secretion. Another ascribes the discharge not to the uterus, but to drainage through that organ from the Fallopian tubes, a theory difficult to explain when we remember that the uterus is filled with glands, while the mucous membrane of the tube is without any.

It is without doubt true that there are many cases in which there is tubal disease and cases of this in which careful examination reveals none of the uterus, but these are cases in which disease of the latter, through its more efficient drainage, has subsided. The limits at my disposal, however, do not permit me to enter upon the discussion of the valid evidence of endometritis, nor is such information necessary for the general practitioner. Your experience and careful observation teach you that there is an inflammation of the uterine canal characterized by local and general symptoms, often of marked influence, and you desire information as to the most effective means of combatting it before it produces too markedly baneful effects by the subsequent complications.

Treatment, then, must depend upon the presence or absence of complications. Endometritis complicated by peritonitis, cellulitis, carcinoma, myomata, and displacements, must be treated secondarily. The complication must receive first consideration.

The treatment appropriate to the uncomplicated disease would but add to the disorder. Our plan of treatment then requires first an accurate diagnosis. In some of the conditions named, the diagnosis will be readily

determined; in others, especially in doubtful cases of carcinoma and fibroid growth, digital exploration of the uterine cavity may be necessary, and preparation for such investigation is most readily ensured by dilatation with the laminaria tent, as presented in a previous talk.

In uncomplicated cases shall we resort to intrauterine treatment? This question has been one prolific of much acrid discussion. One party would condemn any and all intrauterine medication; the other advocates such treatment in every case. The truth, as usual, lies between the extremes. Local or intrauterine applications are capable of producing such baneful influences in cases unsuitable for treatment, that it sometimes becomes a question whether the patient would not have been more fortunate had she never been the victim of treatment, but this question is just as applicable to other portions of the body.

The first consideration for treatment is to secure free drainage, and, second, decrease congestion. Both these considerations are to some degree secured by placing and maintaining the uterus in its normal position, hence the value of tampons. They raise the organ to a higher level and thus decrease the congestion. Medicated, especially with glycerin, they produce a free, watery discharge, which still further depletes the uterus, and especially its glandular structure. Thus drainage and diminished congestion are both secured.

An open, patulous canal invites intrauterine applications. A narrow, tortuous canal should absolutely preclude all intrauterine treatment, unless dilatation has first been done. In such cases, the use of the curette, following dilatation, will be of value, and greatly shorten, if not render unnecessary, any subsequent local treatment.

In suitable cases, the treatment may be antiseptic, astringent or caustic, according to the conditions present.

Intrauterine irrigation with double current tube is very efficacious. For this purpose, hot water, plain or medicated, with bichlorid ($^1/_{3000}$), formalin ($^1/_{1500}$), boracic acid ($^1/_{100}$), or sodii bicarbonate ($^1/_{50}$) may be employed. The efficacious astringents are zinci sulph. ($^1/_{50}$) ($^1/_{20}$), zinci chlorid ($^1/_{100}$) ($^1/_{20}$), argent. nitrat. ($^1/_{10}$) ($^1/_{5}$). The astringents in the stronger solutions are also caustic.

Much value is often secured from the application of ointments in that they are not so readily discharged.

Ichthyol in ointment with lanolin, as a base, is of value. It may be used in strength of ($^1/_{12}$) to ($^1/_{4}$), when it proves germicidal, alterative and anodyne.

In closing this talk, we cannot do better than to reiterate that the *sine qua non* for all treatment must be free drainage. With that established, many cases will recover without further treatment.

TEST MEALS, AND THE BEST WAY TO OBTAIN THE GASTRIC CONTENTS AFTER THEM.

BY BOARDMAN REED, M.D.

To determine the digestive activity of the gastric juice, it is usual to give the patient a definite amount of food and drink, known as the test meal, and then remove some or all of the contents of the stomach at the time afterward when digestion should be at its height. Various kinds of meals have been proposed and are employed for this purpose. The most convenient one, and that which is in most frequent use in both Europe and America, is the Ewald test breakfast. It consists, according to Ewald himself, of an ordinary stale roll and one-third of a liter—about two-thirds of a pint—of fluid. The fluid may be either water or weak tea, without sugar or milk. Tea is that most usually ordered by Ewald and his assistants at their clinic in Berlin. A full goblet of water, not ice cold, answers the purpose quite as well, and is what I usually order for my own patients. In place of the roll, two moderate slices (or a little less than two ounces) of stale bread, or even half a dozen water crackers—not soda crackers—will suffice.

Such a meal should, under normal conditions, uniformly digest into a thin grayish liquid at the end of one hour from the time the patient begins to eat, and it is then you should withdraw the contents for examination and chemical analysis.

It is still advised in some works to empty the stomach in such cases by what is called expression. That is, a medium-sized tube is passed into the stomach, and the patient, with both hands over the epigastrium, is urged to make straining efforts. By holding the breath and active contractions of the diaphragm, the contents of the viscus are sought to be forced up through the tube. This generally succeeds in time in accomplishing the object, but in most cases only after such an amount of serious discomfort, dyspnea, retching, and often vomiting, as must disgust any patient. Indeed, this obnoxious method of getting up test meals and unskillful ways of performing lavage are largely answerable for the very general, though needless, dread of the stomach tube.

Various kinds of pumps or aspirators may be employed for the purpose of emptying the stomach. The best is the kind in use in Ewald's clinic, and is the invention of Kuttner, Ewald's first assistant. These are now to be had at some of the instrument makers in this country, and a cut of one is

herewith shown. It is similar to the Politzer air bag, only larger, of thicker rubber, and without any valve at the top. It is first compressed with the hand, and, while held so, the nozzle is introduced into the end of the tube. Then, when allowed to expand, after being carried down to a point below the level of the lower border of the stomach, sufficient suction is exerted, with the help of siphonage, to empty the contents of the stomach with a minimum of disturbance or inconvenience to the patient.

If the tube should be blocked with mucus in passing down, as sometimes happens, no contents will flow out. In this case, you should disengage the bulb, and attach it to the tube again without compression. Then, by compressing it, you will force its contained air downward through the tube and thus clear out the obstruction. The air thus forced into the stomach causes little or no inconvenience though, exceptionally, enough of it may return with the fluid contents to fill the bulb and prevent a complete emptying. You should then detach the bulb again and introduce it compressed. This, provided the tube has been introduced just far enough, never fails to bring up either all the contents, or thirty or forty cubic centimeters, which are enough for all the necessary tests. If not, the difficulty may be that the stomach contents have passed prematurely into the duodenum as a result of excessive peristaltic action. Full and detailed directions concerning the introduction of a tube will be found in the first of this series of Talks in the October number of the INTERNATIONAL.

Leube and Riegel have recommended and used largely a test dinner to be taken in the middle of the day. It consists of 400 cc. (13 fluid ounces) of soup, 60 grams (2 ounces) of beef, and 50 grams (1⅔ ounces) of wheat bread or a roll. Sometimes a potato is added. The time for the examination of this meal is about three hours afterward.

The ordinary American generous mixed breakfast, with meat, bread or rolls, potatoes and coffee, approximates closely the Leube test meal, and in the case of new patients who present themselves for the first time three or four hours after such a meal, you may find it convenient to empty the stomach at once for the purpose of analyzing the contents, thus gaining, without delay, important and sufficiently reliable information. But when such patients can return at another time, you should have them, if possible, take subsequently the standard Ewald test breakfast, which affords more exact data for comparison.

Do not make the mistake which is sometimes made of attempting to take up such a mixed meat meal at the end of one hour, since it will then be so little digested as not to pass through any ordinary tube without great difficulty. Pouring water into the tube may facilitate the process, but spoils the results of the analysis.

The only other test meal of which it is worth while to tell you is the Boas non-lacteal one for the purpose of testing for lactic acid in suspected cancer of the stomach. Boas advises washing out the stomach at

bed time to remove all traces of previous food, and then, in the morning following, the patient takes six to eight ounces of thin, well-cooked oatmeal porridge, which is prepared and served without milk, cream or sugar. An hour afterward this is brought up in the usual way. Boas' idea was that all breads, rolls, etc., contain milk enough to contaminate the product with lactic acid. But the view formerly advanced by him, that even a very small percentage of lactic acid present in the stomach was a sign of gastric cancer, is no longer accepted. Boas, however, still maintains, and with much clincal evidence in his support, that a decidedly large amount of this acid in the stomach, when not introduced with the food, must raise a strong suspicion of the existence of carcinoma. It is only exceptionally in the worst forms of chronic gastric catarrh, with great stagnation and an unusually excessive amount of fermentation, that a notable proportion of lactic acid is found in the stomach without the presence of cancer. Lactic acid cannot by the usual simple tests be demonstrated in the stomach contents in the presence of free hydrochloric acid.

My next talk will describe the most practicable quantitative tests of the stomach contents.

REPORTS OF INTERESTING CASES.

CHRONIC DISEASES OF THE COLON, AND SOME GENERAL DISTURBANCES CAUSED THEREBY.[1]

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San Francisco, California.

During the early years of my professional career, a class of cases presented themselves to me of a chronic character, generally termed bilious, returning every two, three or four weeks, and I particularly noticed that such patients would have clear conjunctivae, a muddy, sallow skin, foul breath, more or less constipation, with perhaps occasional diarrhea. While the skin was sallow, the condition was not one of jaundice. These cases, living in malarial districts, were frequent subjects of malarial influence. After a very thorough investigation, I found the trouble existed in the colon, as a chronic colitis, with more or less ulceration of that organ, causing fermentation and gases; and by the absorption of these foul substances, the whole system suffered. I have in many of these cases found catarrh of the nose and throat, and dyspepsia. I think I can

[1] Some of these cases were included by the author in a previous report; but the importance of the subject, and the brilliant results obtained by the treatment, seemed to warrant the republication of them in this further report.—Ed.]

best illustrate the subject by a few cases of the many that have come under my observation.

Case 1. The fate of a fellow physician, who talked with me only a few weeks before his death, no doubt had much to do with leading me into the closer investigation of such cases. His troubles were very aggravated, and obscure. There was almost no digestion, no matter how carefully he might diet; acid eructations, tender and bloated bowels. He drifted from bad to worse, tried different springs, and finally succumbed to debility and exhaustion. His urgent request was to be examined *post-mortem*. This revealed two large ulcers in the sigmoid flexure, one in descending colon, and one in the transverse colon. Had this case been understood, it could easily have been cured by antiseptic intestinal irrigation.

Case 2. Mr. C., about fifty years of age, eye clear and pearly white, skin sallow, liver dormant, stomach bad. He was troubled with so-called gastro-hepatic catarrh, and about every three weeks or month would have a bilious attack. A few doses of brisk catharsis would relieve him. Examination of rectum showed a chronic congested condition of the mucous lining. I painted over this surface with a solution of argent. nit., strength 8 grs. to ℥i dist. water, and placed him on enemata of normal sol. sod. chlorid; about two or three quarts of this solution was used to flush the colon. The next night used two tablespoonfuls of the following mixture to two quarts of cool or tepid water:

℞ Acid carbol., ... ℥iss
Glycerin, ... ℥iii
Listerin, ...q. s..... ℥vi

M. S.—Two tablespoonfuls to two quarts of cool or tepid water. Use with syringe.

He kept this treatment going for three or four weeks, got complete relief, and for years has been a well man.

Case 3. An elderly gentleman, who came from the East, purchased a small vineyard, and made his home there, expecting to live but a short time. He had been an invalid for over twelve years. He was a confirmed dyspeptic. He was cold all the time. His symptoms were dyspepsia—clear eye, sallow skin, constipation, vitality very low. I found rectum much congested, numerous red spots over the surface, and many small follicles, much like millet seed, under the membrane. I opened many of these at different times with bistoury and used the nitrate silver solution up to flexure. I then placed him on the salt solution one night, and next night the carbolic acid solution. Before I began his treatment everything he ate at once fermented, and he was a constant sufferer with pain and gases. I placed him on a diet of toast, milk and boiled rice. In one week he reported much relief. The second week vastly better. Third week began to eat almost everything he desired. At the end of two months had gained twenty-five pounds, and was

taking a hand at work on his vineyard. This man is now well and strong, after four years. He had some slight symptoms of a return of his trouble two years after I dismissed him, but a short use of his medicated washes relieved him. His disease was located in transverse and descending colon, as there was great tenderness along their course, and no doubt ulceration.

Case 4. An old soldier, aged about fifty-five years, in the camps of the Potomac contracted diarrhea, and had had it as often as once per month since that time. There was the clear eye, sallow skin, debility, a great deficiency in red blood corpuscles, marked soreness over transverse and descending colon. This man was so weak he could only crawl around. His physician very plainly informed him there could be nothing done for him and he must soon die. I gave him these medicated washes for the colon, and put him on blood tonics. Well in a few months, and went to work.

Case 5. Recently I was called to a patient in consultation with another physician. It was a case of dyspepsia, with tenderness over bowels, marked over the colon from cecum, around to sigmoid flexure. After the case was thoroughly gone over, we concluded to give her the irrigation per anum for chronic colitis. In a short time her tongue cleared, appetite improved, her distressing symptoms gave way, and convalescence began, and went on uninterruptedly. This patient had been ill for years.

We can place all old soldiers who have chronic diarrhea in this class. Some have also chronic rheumatism or neuralgia. The diagnosis can generally be made by a careful examination over colon, when tenderness can be made out easily. As to treatment, have the patient get a four-quart fountain syringe. Hang it about seven or eight feet high. Then have made a saturated solution of salt and use one or two tablespoonfuls to each quart of tepid water. The patient should lie on the right side, either on the floor or on a low cot, inclining slightly over on to abdomen. Introduce the tube into the rectum and turn on the water. Let it run very slowly, and have the patient retain as much of it as possible before going to stool. Use the salt solution one evening and the carbolic solution the next evening.

Internally for these cases I use

℞ Salol., ... gr.xxx
Iodoform, ... gr.xv
M. Ft. in caps., xv.
S. One 3 times a day, one or two hours after meals.

℞ Guaiacol carb., ... gr.xxx
Ft. in caps., no. xv.
S. One 3 times daily.

Should the patient be troubled with diarrhea, I give iodoform as above, and then the following:

℞ Zinc sulphocarbolat, ... gr.xv
Aqua pura, ... ℥iv
M. S. Teaspoonful every 4 or 6 hours during the day.

The diet should be carefully selected. Milk is by far the best, hot or made into soup, meat-broths, rice very thoroughly cooked with milk or cream, most of the mushes, but the diet must be suited to the case.

We must not forget that there are ways of medication other than by the mouth, and that intestinal irrigation in these troubles brings the medicine in direct contact with the lesions, and healing takes place rapidly.

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SELECTIONS.

A UNIQUE CASE OF CONGENITAL MULTIPLE NEVUS PIGMENTOSUS.

BY BURNSIDE FOSTER, M.D.,

Clinical Professor of Dermatology in the Medical Department of the University of Minnesota; Surgeon to the Skin and Venereal Department of the St. Paul City and County Hospital; Dermatologist to St. Joseph's, St. Luke's, and Bethesda Hospitals, etc.

THE history of this remarkable case may be told in a few words. N. G., aged twenty-one, born in Sweden, family history negative. Strong, well-developed young man, apparently healthy in all respects. The appearances shown in the photograph existed at birth, and have not altered since, except that the large growth on the back has spread slowly during the last few years. There is a slight secretion from the deeper fissures of the large growth and an offensive odor. With the exception of the large growth, the moles are nearly all smooth and flat with, here and there, notably on the shoulders and right buttock, a growth of hair. The question of malignancy of this growth must be determined by the future clinical history. The accompanying photograph shows so well the appearances that no further description seems necessary.

Histology.—The sections submitted for examination were taken from the large growth between the shoulders. They were stained with hematoxylin alone.

Unna ("Histopathology," p. 1,129) has made a thorough investigation of these growths, so thorough, in fact, that it remains only for later investigators to confirm or disprove his findings on minor points. The tumor in question belongs to his class of "soft moles" which are carcinomata, and not endotheliomata, as claimed by Von Recklinghausen, and are developed, according to Cohnheim's theory, from epithelial cell rests, detached

from the epidermis in fetal or early life. In many places in these sections connection can be traced between the cell masses and the covering epidermis, there being, apparently, no basement membrane.

The epithelium is not, as a rule, greatly thickened, although there is

some increase in all its layers, but the rete pegs are enormously prolonged and form an anastomosing network. The basal layer is deeply pigmented in certain areas, not uniformly. In the meshes of the network and in the papillary body generally are seen the rounded, snared-off masses of cells.

Their borders are clearly demarcated, generally by connective-tissue. The cells show oval, vesicular, deeply staining nuclei, their contours being made out with great difficulty. Further down in the cutis are seen columns of epithelial cells, oftenest horizontal, between the connective-tissue bundles. The cells are closely packed, their nuclei are smaller, more elongated and less vesicular. More deeply, but still in the cutis, the cells are arranged in loose masses, more widely separated from each other, their outlines more clear and the nuclei larger than in any other situation. The appearances here strongly suggest a malignant carcinoma, except that there is no mitosis. Pigment is irregularly scattered through the cell masses and cords lying within and without the tumor elements. The appearance in the former case is often that of a nucleated clump of pigment granules. Vacuolation of the nucleus is frequently apparent both in the new growth and epidermis.

In the cutis the lymph-spaces are enormously dilated, but there is no proliferation of the lining endothelium. There is considerable proliferation of connective-tissue cells. Careful search failed to show any trace of coil-glands or ducts; here and there, however, attached by solid cords to the surface, were groups having the structure of sebaceous glands, evidently tumor cells pursuing their physiological course. In this tumor there is both epithelioma and acanthosis, *i. e.*, epithelial proliferation with and without fibrillation, the latter, of course, occurring in the epidermic meshwork.—*Jour. Cutaneous and Genito-Urinary Diseases.*

The Inflammability of Celluloid Hair Pins to the Static Breeze.—The editor of the *Journal of Electro-Therapeutics* recently had a most disagreeable experience, which might have proved to be a serious accident. It may serve as a warning to those using static electricity. A young lady was being treated with the static breeze on the head from an ordinary static head crown. The crown was about 18 inches from the hair, and was attached to the negative pole of the battery direct, while the positive pole was in connection with the stool on which the patient sat. The day was clear, and the charge generated was moderately strong, certainly much less than has often been given. The hat having been removed, the shower came down in profusion over the head and shoulders, and was not at all disagreeable, until suddenly a scream, and the most painful expression of countenance gave warning that something had gone wrong. The motor was at once disconnected. A column of smoke arose from the patient's head, while she continued to scream the louder. Before he could reach her, a second column of smoke, and then a third, arose. He tore down the hair with all possible haste, and removed the charred remains of three celluloid hair pins, one of which was only partly destroyed. He succeeded in smothering the fire with his hands only after three spots of hair had been burned away, varying in size from a quarter to a half dollar, and the scalp had been quite seriously burned in one place and slightly burned in another.

REVIEW OF MEDICAL AND SURGICAL PROGRESS.

INTERNAL MEDICINE GENERALLY.

UNDER THE CHARGE OF

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Thyroid Gland in the Treatment of So-Called Rheumatic Affections and Especially Arterio-Sclerosis. Lancereaux (*Gaz. Med. Belge,* Nov. 15, 1899), thinking that myoidema was analogous in many respects with many herpetic and arthritic conditions, conceived the idea of giving thyroid gland in such conditions. He quotes these cases: A young woman with generalized scleroderma, affecting especially the face, neck, trunk and, above all, the upper extremities, where the skin was pigmented, thick, hard as wood, and seriously interfered with movements, was healed with increasing doses of iodothyrin. She improved rapidly, and at the end of four months was almost well. A woman of 32 years had for six months, under the influence of emotion or cold, vasoconstriction of the fingers, followed by dilatation. She had in addition profuse sweating and exaggerated salivation. The result of treatment was that the vasomotor condition materially improved, while the sweating and salivation altogether disappeared. A man of 36 years had chronic rheumatism, gout, and arterio-sclerosis, with increase of arterial tension, hypertrophy of the heart and interstitial nephritis with albuminuria. Treatment removed the joint pains and thickenings and the trophic trouble of the finger nails disappeared. At the same time, the arterial tension lessened considerably, and the nocturnal polyuria and albumin diminished; the heart diminished in size and the accentuated aortic second sound became almost normal. The same result was obtained in a man of 41 years, who had arterio-sclerosis, cerebral hemorrhage and interstitial nephritis with albuminuria. He has under his care several patients with arterio-sclerosis who are steadily improving.

On the Rapidity of the Elimination of Alcohol from the Animal Organism. Tamaschaw (*Vratch,* Vol. XX., No. 9) has endeavored to determine, by a series of elaborate and carefully conducted experiments, the rapidity with which alcohol disappears from the body, and whether the

administration of kola nut favors rapid elimination. For this purpose 20 rabbits were selected and divided into 6 groups. The first (consisting of 3 rabbits) was used for determining whether ethyl alcohol is normally present in the tissues. The result was practically negative. Second group (3 rabbits) was used to determine the amount of ingested alcohol eliminated within 2 hours, and it was found that 47 per cent. of the alcohol administered through a catheter was eliminated during that time. Third group (3 rabbits), the same within 5 hours. Result: 58 per cent. eliminated. Fourth group (4 rabbits), the same within 10 hours. Result: 70 per cent. of the alcohol could not be recovered. Fifth group (4 rabbits) was used to determine the influence of kola on the elimination of alcohol, and the following results were obtained: The administration of kola facilitates the elimination of alcohol to a slight degree (7 per cent.); but, at the same time, seems to prevent the lowered temperature from attaining its normal limit. The sixth group established the fact that within 24 hours the entire amount of alcohol is practically eliminated from the body, but still the author supposes that a slight, undetectable amount may remain, which, when accumulating after repeated ingestion, may lead to chronic poisoning. A. R.

DISEASES OF THE CHEST.

UNDER THE CHARGE OF

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The Mechanical Treatment of the Edema of Heart Disease.

Borgherini *(Archiv. fur klin. Med.,* Band LXI., Heft 5 and 6) recommends the original method of Traube, modified by the introduction of asepsis. Four incisions are made in the legs, one in each side over the malleoli, and two in the skin of the calf. These incisions are 2 to 3 cm. long, extend down to the subcutaneous tissue, and are made with the greatest care as to asepsis. The wounds are then covered with aseptic gauze, the whole limb is wrapped in sterile cotton wool, and bound with parchment, leaving a small portion of the heel uncovered. A bandage is then applied over the whole dressing. The patient is placed as comfortably as possible—usually in a semi-reclining position on the edge of the bed, with his legs supported by a stool—and a basin is arranged to catch the fluid that drains through the opening at the heel. The dressing is changed

with all due care once in 24 hours. After the disappearance of the edema, the wounds heal readily. The dropsy of heart disease, after a certain stage is reached, is in itself a cause of cardiac weakness by increasing the resistance to free circulation in the peripheral vessels. The fluid is moreover a reservoir for the collection of toxic substances that the kidneys fail to throw off in their weakened condition. The indications for the institution of the mechanical treatment are the failure of the heart to respond to the usual stimulants and the collection of a considerable amount of fluid in the subcutaneous tissues. The results are the strengthening of the heart's action and renewed efficiency of internal medication. The kidneys also are relieved from their congestion, and the urinary secretion is raised to the normal amount, and often a true polyuria follows that relieves effusions into the serous cavities. The fluid withdrawn is a true transudate. Its quantity in the 24 hours varies according to the position of the patient and the number of incisions and amount of edema, from 6 to 13 liters. Gerhardt has observed stupor and mild delirium and Klemperer an acute anemia of the brain during the treatment, all of which quickly pass away and can probably be avoided by keeping the patient as nearly prone as possible. B. reports 3 cases, all of whom were decidedly benefited when all other measures had failed. In one case an erysipelas of the leg quickly healed as the edema was removed.

The Relation of the Trachea and Bronchi to the Thoracic Walls as Determined by the Roentgen Rays. Blake *(Amer. Jour. of Med. Sciences,* March, 1899) reports an interesting series of observations upon this subject. He employs cadavers hardened with formalin solution and into whose tracheae a metallic alloy had been injected. He arrives at the following conclusions: The trachea which is in the median line at the lower part of the neck lies in the right sternal line at its bifurcation, which corresponds to the right side of the center of the vertebrae posteriorly, about the level of the intervertebral disk between the fourth and fifth vertebrae, which points nearly to the tip of the fourth thoracic spine. This point is not absolute, as it is influenced by the respiratory movements and by the position of the head and neck. Anteriorly, this point in adults is just internal to the junction of the lower border of the second costal cartilage with the sternum; in children under the right border of the sternum at the level of the third costal cartilage. The relations of the stem bronchi are given at length, and the reader is referred to the original paper for details.

Heredity in Tuberculosis. Hauser in an important article *(Deutsches Archiv. für klin. Med.,* Oct. 27, 1898) gives an exhaustive review and criticism of the work already done upon this subject, and adds the results of a series of experiments upon the lower animals. The cases of undoubted bacillary ante-partum infection recorded in literature number 18, according to the writer's analysis. Of these all have inherited the disease from the mother, and not one from the father. The mother has almost always been suffering from an advanced form of the disease at the time of birth, that has rapidly proven fatal. Even in these cases, only 10 per

cent. of the children are tubercular. These facts are in direct opposition to the well-known conclusion from statistics that the occurrence of tuberculosis in the offspring comes quite as often when the father has the disease as when the mother is afflicted. It is to be noted that the semen contains tubercle only in the most acute or advanced cases in men. In congenital tuberculosis, 80 per cent. of all the children show localization of the disease to the liver, or the portal lymphatic glands. In all other decades of life such lesions are very rare. This form of tuberculosis, which undoubtedly occurs as has been demonstrated in many fetuses and young infants, may be regarded as a terminal infection similar to the general dissemination of other micro-organisms throughout the body in the agonic period. To settle the question whether a true bacillary infection before birth plays any part in the causation of tuberculosis, researches will have to be made in cases in which the parents do not show an advanced stage of the disease. It has been shown that in families in which one or both parents have died with tuberculosis, most of the children have been born while the disease was in a very early or latent stage. Again, tuberculosis in some families apparently skips one generation to reappear in the next. Hauser has made a series of experiments upon rabbits and guinea pigs, in order to determine the possibility of hereditary bacillary infection in instances in which the mother had the disease in a localized form. He had not one positive result. He watched the offspring of the animals thus infected for two generations, and could discover no lack of strength or nutrition in any of them, nor did any develop tuberculosis. He denies the analogy sometimes drawn between the hereditary transmission of syphilis and tuberculosis, because in syphilis the earlier stages of the disease are most dangerous to the child and the symptoms appear very soon after birth. Baumgartner's opinion that apparently primary tubercular affections of the bones, lymphatic glands and brain are always an evidence of latent congenital tuberculosis is not true, as it has been shown that infection can occur in these localities from without, through the mucous membrane, without causing lesions at the point of entrance. Hauser does not believe that the tubercle bacilli can remain latent in the tissue after entering the body in fetal life. He concludes that unlike syphilis, direct bacillary congenital infection cannot be considered as a factor in the causation of tuberculosis. So-called cases of congenital infection are really the result of post-partum infection through the usual channels. There is, however, probably an inherited susceptibility in such children to the tubercle bacillus. Full tables accompany the article.

Widal's Method Used in Differentiating the Bacillus of Hog Cholera from Other Micro-organisms. Schwartz, of Russia, found that the serum of a dog immune to hog cholera will produce agglutination of the bacillus of hog cholera, while the bacillus suisepticemiae, the comma bacillus and bacillus of typhoid fever are not affected by this test.

DISEASES OF THE DIGESTIVE SYSTEM.

UNDER THE CHARGE OF

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Perforating Ulcer of Duodenum; Operation; Recovery. Taylor (*Georg. Jour. of Med. and Surg.,* Feb., 1899) reports a very interesting and instructive case of duodenal ulcer, in which an operation saved the life of the patient. This, in so far as the author could ascertain, is the second case of recovery reported. The symptoms of this affection are, as a rule, obscure and confusing, the classical diagnostic signs being exceptionally present. In the case reported by the author a diagnosis of appendicitis was made, the patient, a girl seventeen years old, having suffered from some non-localized intra-abdominal pain. About a week after the pain occurred perforation took place, but was not attended by any severe symptoms. A circumscribed abscess formed, which soon burst into the peritoneal cavity, precipitating the patient into a condition of extreme collapse. With a diagnosis of a perforated appendix, the patient was sent to the hospital, and the usual operation for appendicitis made. The appendix, however, proved innocent. The incision was enlarged downward and the uterine adnexa searched, but they were not at fault. Attention was then directed to the bile tract, and the incision carried upward to the ninth costal cartilage. The bile tract was also found free from any morbid condition, but in this situation the duodenal perforation was easily discovered. It was situated on the anterior surface of the third portion of the duodenum, about midway between its free border and mesenteric attachment. Notwithstanding the beginning general infection and the large amount of pus in the peritoneal cavity, the patient ultimately recovered.

Esophageal Stricture—an Analysis of Forty Cases. Kelynack and Anderton (*Med. Chron.,* Vol. X., No. 2) have elicited the following facts from post-mortem examinations at the Pathologic Department of the Manchester Infirmary. Among 4,859 cases, esophageal stricture was found in 40; 6 of these were simple or fibrous, the others malignant. The former were all in males, the maximum age being 47, the minimum 12 years. In 2 of the 6 cases the stricture was practically impassable. Ulceration at the site of the stenosis occurred in 2 cases. In 1 case the etiologic factor was half a tumblerful of turpentine, swallowed 4 to 5 years before difficulty in swallowing was first noticed. Dilatation above the stricture occurred in 2 cases, in one of which the entire circumference was involved. In one case

numerous small superficial ulcers were discovered near the pylorus. Of the 34 strictures of malignant character, 26 occurred in men and 8 in women, the ages ranging from 39 to 71 in the former, and 29 to 57 in the latter. The consistence of the growth was more frequently hard than soft in the proportion of 2 to 1. The growth extended to the pharynx in 2 cases, and to the stomach in 3. In one instance, the stomach became implicated by extension along the gastro-hepatic omentum. Extension also took place by invasion of neighboring organs, through lymphatic channels and along the course of the blood-vessels. The average duration of the disease, as found in 20 cases, was 7⅓ months; in one instance only it exceeded 13 months, while in another it was less than 3 months. In females it was nearly 2 months longer than in males. A family history of malignant disease was present in 3 cases only. As having a possible bearing on the disease, the following conditions were noticed: One man swallowed some solution of ammonia about 26 years prior to his admission. Another sustained a slight injury to his chest in a crane accident 6 months before admission. His mother died from cancer of the breast. A third had suffered from paroxysmal dysphagia for 20 years. In 3 cases the dysphagia dated from the following morbid conditions: In one, influenza 5 months before admission; cold with aphonia and sore throat 12 months previously in another, while in the third pneumonia occurred 3 years before, leaving the patient with a persistent cough.

A Clinical Study of the Relation of the Blood, the Urine and the Gastric Contents in Diseases of the Stomach. Lichty *(Phil. Med. Jour.,* Feb., 1899) establishes, by an analysis of 111 cases, the following facts: 1. The average hemoglobin-percentage is slightly above the normal in cases of hyperchlorhydria, and slightly below normal in cases of hypochlorhydria. 2. The average hemoglobin-percentage is higher in cases of gastric achylia than in those of hyperchlorhydria. 3. The average number of red blood-corpuscles varies with the hemoglobin. 4. The average specific gravity of the urine does not sustain any definite relation to the blood and the gastric contents in the various forms of disease of the stomach. 5. The study of the degrees of acidity of the urine in the various groups has not revealed any definite information. 6. While in averaging the cases there may be a certain relation between the blood and the gastric contents, yet in each group, individual cases show without a doubt that there is no such definite relation as will enable one to determine the condition of the gastric contents from the study of the blood and the urine alone. 7. The absence of any definite relation between the blood, the urine and the gastric contents is not peculiar to diseases of the stomach. The author further states that an examination of the stomach contents is especially valuable from the therapeutic as well as prognostic standpoint. Only the determination of the chemism of the stomach will furnish sufficient data for instituting a proper dietetic regimen, while all the other parts of a thorough physical examination are equally important as indicators of the general condition of the patient.

NEUROLOGY.

UNDER THE CHARGE OF

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Some Points of Special Interest in the Study of the Deep Reflexes of the Lower Extremities. Mills *(Jour. Nerv. and Ment. Dis.,* Mar., 1899, Vol. XXVI., No. 3) considers several important points under this head. First. Ankle clonus, with absence of knee jerk. He reports the case of a man paralyzed in both lower extremities, with similar areas of analgesia over the anterior and external surfaces of both thighs and legs; with vesical and rectal disturbance, and with marked heart disease. On each side the quadriceps jerk was present and the knee jerk absent; on the left side ankle clonus was obtainable. *Post mortem:* No gross nervous or muscular lesion was found, but microscopically an unusual number of nerve fibers with beaded myelin were seen in a posterior root from the first lumbar segment; the anterior crural nerves showed some degeneration; tissue from the sartorius muscle was greatly altered. The writer attributes the loss of the knee jerk conjointly to disease of muscle and nerve, and explains the vesical and rectal trouble by the theory of muscular alteration. An impaired circulation, causing imperfect elimination of toxic substances, may have produced a condition of auto-intoxication and consequent muscular degeneration. The unilateral ankle clonus may have been brought about by an inflammation of the nerves to the tendo Achillis, the nerves of the calf probably escaping. In those cases of peripheral neuritis in which the knee jerk is lost and ankle clonus is present, the cells of the sacral region controlling the ankle phenomenon may possibly be hyper-excited by inflammation of the nerves having their reflex arc in the lumbar segments concerned in the patellar reflex. Sometimes certain forms of irritation of a nerve trunk may cause excessive irritability in muscles supplied by it. Knee jerk may be abolished from disease of any portion of the patellar reflex arc. The segments of the spinal cord included in the patellar reflex arc are situated between the second and fifth lumbar segments inclusive. The reflex arc of the tendo Achillis is probably situated somewhere from the first to the third sacral segments inclusive. When the patellar reflex is absent disease must exist in Westphal's zone, which zone is an area of the spinal cord, limited by an imaginary line drawn parallel to the posterior septum through the point where the posterior horn makes a bend; by the inner side of the posterior horn and by the periphery of the cord. Summarizing the literature on the subject, Mills concludes that the syndrome of lost knee jerk with the presence of ankle clonus may be due to a compression or destroying lesion involving the spinal cord in the region of the patellar reflex arc; to focal lesions in the reflex arc and lateral columns; to a combination of muscular and neural disease; to

developmental arrest of the spinal cord, on theoretical grounds; to a focal lesion in the cerebral cortex or cortical spinal tract, or to arrested development of this tract, associated with disease of the crural nerve and its muscles. Second. The significance of ankle clonus in the diagnosis of organic from functional diseases, especially hysteria. The author's views on the occurrence of ankle clonus in hysteria accord with those of Gowers, who believed that such an occurrence is so rare that it does not lessen the value of the sign in organic disease, and the most important sources of error in those who maintain the contrary are the non-recognition of co-existing organic lesion, the failure to properly estimate toxemia or malnutrition, and error in diagnosis. Cases of grave hysteria with muscular hypertonicity and the diathesis of contracture may afford examples of true ankle clonus which is, however, secondary to the diathesis or the muscular condition. In the examination of many cases of hysteria, hystero-neurasthenia and neurasthenia, organic disease having been excluded, ankle clonus of the persistent type has not been obtained; although irregular, abortive or spurious responses have been observed. Third. Patellar clonus. This has been said to represent the highest grade of reflex excitability of muscle or tendon in the lower extremity. It may be absent when ankle clonus is present or present when ankle clonus is absent; usually, however, the two phenomena are associated. It is probably present in hysterical cases under the same conditions as ankle clonus. Fourth. Tendo Achillis jerk in tabetics. In tabes the knee jerk and ankle jerk are most frequently absent. In cases of purely sacral tabes tendo Achillis jerk may be diminished or lost, and the knee jerks be present. It may be present when no knee jerks are obtainable. In cases of encephalic tumor, where the examination of the tendon reflexes suggests tabes, absence of the muscle phenomena makes the diagnosis of neoplasm probable, the most likely explanation being that a general toxemia, excited by the growth, has exerted its influence either upon the posterior roots of the spinal cord or upon the muscle itself.

Electricity as a Laxative. Hühnerfrauth gets excellent results in the treatment of constipation from the use of electricity applied directly to the rectum. It is best used in the form of the faradic current on the abdominal muscles, while the galvanic is directed to the intestinal tract. The galvanic electrode should possess a larger contact surface than usually employed. With the patient in the recumbent position, a large electrode, 40-60 cm., is placed on the abdominal walls in the position of the descending colon, while the other electrode is slightly warmed, lubricated with vaselin and introduced into the rectum. The sitting should not last more than 3 to 5 minutes, and the dose not exceed 2-5 M. A. Interruptions of the current should be avoided.

MEDICAL DISEASES OF THE KIDNEYS.

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Case of Movable Third Kidney. Cheyne *(The Lancet,* Jan. 28, 1899) reports a case of the above in a woman 22 years old, suffering from indefinite abdominal pain, indigestion, and a general hysterical condition. The only special feature in the symptoms was diminution in the quantity of the urine when the pain was severe. Mr. Coalban detected, on examination of the abdomen, a swelling below the umbilicus, which was tender and corresponded to the chief seat of pain. The patient being anesthetized Cheyne felt easily an irregular, flattened, tender swelling behind the right rectus muscle at the brim of the pelvis. The swelling was somewhat, but by no means freely, movable, and had a nodular character. It could not be felt from the pelvis and had no connection with the pelvic organs. No definite diagnosis could be made. Movable kidney was suggested, and was discarded on account of the situation of the tumor and the fact that it could not be passed into the loin. An explorative operation found a well developed kidney on the right side of the lower part of the spinal column, just at the brim of the pelvis, having its own ureter and blood supply. In addition the right kidney was found 3 to 4 inches distant, in the right loin and apparently of normal size. The left kidney, somewhat smaller than the right, was found in the left loin. The symptoms were relieved after this procedure, and no doubt were due to the mobility of the third kidney and probably slight pressure on, or kink of, the ureter.

A Case of Sarcoma of the Kidney, with Nephrectomy. Winslow *(Maryland Med. Jour.,* Feb., 1899) reports case in a female 21 years old, with family and previous history good. She was quite nervous and had St. Vitus' dance when 11 years old. At 17 had convulsions and pain in lower part of abdomen, with no enlargement, lasting some years, and probably hysterical. She first noticed, while walking, a sensation of uneasiness as if something was "drawing up" in the lower part of the abdomen, accompanied with dyspnea. This sensation persisted and became exaggerated until she was in pain almost all the time. On physical examination the patient was found to be anemic, had lost considerable flesh in the last six months. A tumor was found on the left side of the abdomen extending from the rib to the pelvis. The tumor was smooth, elastic, and ovoid in shape and movable to a limited degree, and at one point there was a distinct

nodule. It was painful and sensitive to pressure, dull on percussion, and the colon resonance could not be determined. When the patient reclined upon her back a marked prominence on the left side of abdomen was seen. Lungs and heart were negative, bowels constipated, urine acid, sp. gr. 1,026; some albumin, no sugar, but epithelium, urates, red corpuscles and pus cells present. Pelvic organs were healthy. Diagnosis of sarcoma of the kidney was made. Four months later operation was done with the following result. The descending colon was found overlying the anterior part of the tumor, which extended beyond the middle line of the abdomen. The meso-colon was spread out, and looked as if a layer of muscular fibers had developed in it, resembling the tissue of dartos. The posterior lamella of the meso-colon was divided and the tumor enucleated. It was encapsulated and its removal was not difficult. The ureter was larger, and renal vessels rather small. The growth arose from the pelvis of the kidney and was filled with cysts containing bloody fluid and with soft grumous matter. She recovered without complications. The growth proved to be a round-cell sarcoma, arising from the connective tissue of the kidney or its pelvis. Diagnosis was based upon (1) tumor, (2) pain, (3) hematuria. The prognosis was grave, and four months after operation it was reported that a recurrence was already in progress.

Movable Kidney. Wallace (*The British Med. Jour.*, Feb. 11, 1899) says his experience coincides with that of Greig Smith, that a considerable number of movable kidneys occur especially in the upper class. Of 14 cases under his observation 13 were females, of whom 7 were unmarried and only 1 of the others had borne children. He believes that emaciation, as a rule, is not the cause of mobility. Alluding to Drs. Cunningham and Kendal Frank's investigations, he said they still left it unexplained (1) why women suffered more frequently than men; and (2) why the right kidney was more frequently affected than the left. He does not believe that the liver has anything to do with this latter fact: probably variation in anatomical relationship and fixation would eventually be found to play an important part in initiating the condition. Indicative of this is the fact that movable kidney is not known to be more frequent in children than had been hitherto supposed. Recognition of movable kidney was easy, but mobility was not proportionate to other symptoms. Shape, swelling, direction and character of movement facilitated diagnosis. Clinically the symptoms could be grouped under four heads: (*a*) Mobility, giving rise to no symptoms; (*b*) pain, in no way characteristic of renal affections; (*c*) renal pain, distinctive of renal conditions; (*d*) gastro-intestinal symptoms, accompanied by or ending in neurasthenia. Generally the kidney was healthy. Intermittent hydronephrosis might be caused by movable kidney and most probably the valvular condition sometimes found in the ureter or pelvis of the kidney was a result of this, not a cause, the initial cause of the hydronephrosis being a kink in the ureter. In regard to treatment three classes of cases have to be considered: (1) Those in which the condition was found by accident, with no symptoms, require no treatment; (2) where palliative measures succeeded; (3) where nephropexy was necessitated.

DERMATOLOGY.

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Seborrheic Eczema and Injections of Calomel. Brault *(Annales de Dermatol. et de Syphilog.,* Jan., 1899) reported to the French Society of Dermatology and Syphilography a case of eczema seborrheicum in which the eruption was made to disappear by the employment of injections of calomel. The author says: "I have previously called the attention of the Society to the marked but temporary action of calomel injections upon psoriasis. Lupus, elephantiasis and leprosy had been benefited by the same treatment. I wish to announce another observation of a similar character. I am treating at the present time a man of forty years, affected with tertiary syphilis, but who has not presented for a long time any cutaneous or mucous membrane lesions. This subject, in addition, has a typical seborrheic eczema in the region of predilection, namely, the chest. One cannot be deceived as to its nature. The affection is pruriginous, the center of the plaques irregular and yellowish-brown; the borders are of a brighter red and the plaques covered with greasy scales. Each time that this patient is placed upon calomel injections, the lesions fade and disappear, the improvement dating from the second injection. In about six weeks, however, the eruption returns. This is another observation to prove that if calomel causes certain skin affections to disappear, it does not cure them."

An Outbreak of Acute Dermatitis due to Zinc Salts in Clothing. Taunton *(Lancet,* Dec. 3, 1898, p. 1,470) reports a number of cases of inflammation of the skin due to the wearing of clothing impregnated with chlorid of zinc. A number of employees had been supplied with new blue frieze overcoats, immediately after which 34 of them presented evidences of dermatitis. The day on which they were first worn was a rainy one, causing the coats to become wet. The patients all presented, upon one or both wrists, or the neck, small, whitish, cream-colored points, which soon coalesced into larger patches, surrounded by an erythematous zone. In one case, a patch was present upon the back of the calf of the right leg, corresponding to the level of the lower margin of the overcoat. From some reason, this patient had omitted to put on his leggings that morning, and, as the day was wet, the moisture from his coat had soaked through his trousers. The patches were slightly depressed, and the appearance was strongly suggestive of necrosis of the

epidermis following the application of a strong irritant. Tactile sensation was impaired, but not lost. Some of the patches had a bluish tint, due, no doubt, to the dye of the coat. It was noted that the appearances were most marked in the neighborhood of existing abrasions. In three cases there was some spreading of the inflammation up the arm and enlargement of the axillary glands. That the moisture was necessary to the production of the dermatitis is proven by the fact that several employees received their overcoats a fortnight earlier, but only exhibited symptoms on the same day as the others, which was the first rainy day. The cloth was soaked in water and the solution subjected to chemical analysis. It was found to be of acid reaction and to contain chlorid of zinc.

Treatment of Eczema in Infants and Children. Allen *(New York Med. Jour.,* April 1, 1899) states the following to be the underlying principles in the treatment of eczema of infants: (1) Superintendence of the clothing, especially that which comes next to the body, with special reference to the diaper. (2) Regulation of the bath and daily washing; regulating the nursing periods. (3) Examining the mother's milk as to quantity and quality. (4) Prevention and correction of intestinal derangements on the part of both infant and mother, including constipation in the latter. (5) Protection of the infants' delicate cutaneous structures from those irritations which may arise from various causes, including soap, water, sun, heat and cold winds. The author believes it to be of the utmost importance, in order to secure good and permanent results in eczema situated in parts below the scalp, that the latter should be kept free of the dirty and greasy crusts so frequently observed. For this condition he employs the following prescription: ℞ Resorcin, 0.5-1.0; washed sulphur, 2.0-4.0; lanolin, 5.0-10.0; lard, ad 100.0. In eczemas about the anogenital region and groin, he claims very satisfactory results from the use of a three per cent. water solution of methylene blue. This preparation is analgesic, protective and antiseptic. Children should be placed upon a vessel every two hours and so encouraged to urinate and defecate without irritating the cutaneous surfaces. In children with anemia and inactive secretions, the author recommends the following: Calomel gr. $^1/_{10}$; saccharated iron carbonate, gr. $^1/_2$; powdered white sugar, gr. ii, given in milk. To prevent scratching and rubbing and to retain the application *in situ,* particularly in eczema of the face, a mask for the scalp and face is advised. Strips of linen covered with the ointment applied to the desired regions are held in place by the mask. The author concludes by saying: "I find that the statement to parents, 'that their offsprings' skin eruption must not be too quickly healed,' comes rather frequently from those practitioners whose ability to effect a rapid cure might come into question."

Extra Genital Syphilis.—Dr. Posenkbist reports in the *Vratch* a rare case of chancre in the nasal septum, accompanied by a general eruption and other sign of syphilis. The patient was infected by her child 10 months old, who was infected by a female relative suffering from syphilis.

PEDIATRICS.

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Should Children under Ten Learn to Read and Write? Patrick *(Appleton's Pop. Sci. Monthly,* Jan., 1899) says that in the elementary schools of Chicago, from 50 to 72 per cent. of the school time is devoted to reading, writing and arithmetic. In most of the other large cities in the United States a still more prominent place is given to these studies. Patrick goes on to show that such an adjustment of the school curriculum is wholly accidental and is not founded upon our knowledge of child development. In writing, the child is obliged to sit still, a difficult thing for him to do; and, more than that, he is required to perform finely co-ordinated movements which he is not really fitted to perform. Thus a deleterious influence is exerted upon the whole nervous system. In writing and in reading, fixed attention is required, and this again is difficult for the young child to give. That various ocular disturbances are directly attributable to such studies, the author confidently affirms. In mathematics the young child is required to employ abstract reasoning, and symbols which convey but little to his mind, and it is a well known fact that activity in childhood is sensory and motor but not central. In other words, the association and apperception centers have not been developed. The author then shows how much more rational would be a curriculum in which nature studies, history and the modern languages occupied the most prominent places.

Treatment of Whooping Cough by Inhalation of Medicated Oxygen. Lacroix *(Gaz. Heb. de Med. et de Chirurg.,* Oct. 2, 1898) presents the results of his experience in treating 25 cases of whooping cough by inhalations of oxygen saturated with bromoform, bromid of camphor and cherry laurel water. He uses a reservoir called a saturator, which contains pieces of pumice holding the medicaments over which the oxygen is passed. A mouthpiece is placed over the patient's mouth and the gas impregnated with the vapors is thence inhaled. M. Coyon also treated over a hundred cases in this manner and M. Dutrambley has employed a similar method. The advantages are that the paroxysms of cough are modified, which diminishes both their number and intensity. Complications are obviated and the organism is strengthened and enabled to resist the invasion of other infectious diseases which so frequently follow pertussis.

Infantile Hysteria. Ferrien *(Arch. de Neurologie* IV., No. 223) reports 18 cases of very interesting character in from 1 to 14 years of

age. Among these, 5 gave the syndrome of meningitis, 4 of organic paralysis and contractures, 1 resembled a toxic paralysis, and 2 had polyuria and polydipsia, simulating saccharine diabetes, and 1 resembled coxalgia. He shows how frequently hysteria is associated with other neurotic foundations and organic diseases. In the treatment, he realizes that the largest measure of hope is to be had through appealing to the child's intelligence and latent powers of self-control, and by gently but firmly dominating its convictions.

Addison's Disease in Children, with the Report of a Case. Lartigau and Happel *(Albany Med. Annals,* Jan., 1899) review the history of Addison's disease and report a case occurring in a boy of 12, who died with characteristic symptoms. A very careful autopsy was made and reported at length. Both adrenal glands were enlarged, of firm consistency, with calcareous deposits. The appearance of the surface, on section, is similar in both and consists in mottling, two diffuse areas of yellow, suggestive of caseous material, and elsewhere the surface presented a yellow brown color. In the right adrenal, the medullary portion was occupied by circumscribed or diffuse areas of calcareous matter, which took the eosin stain. In the remaining portion of the medulla, in the cortical areas, were seen diffuse extensive patches containing small round and elongated cells, the nuclei of which stained faintly and corresponded in their morphology to epithelioid cells, among which were small round cells, and also a few giant cells of the Langhan's type. Other portions showed areas of caseous degeneration. Of sections stained by the carbol-fuchsin method for tubercle bacilli, only 2 in 8 showed a scanty number of the bacilli. The left adrenal was similarly but less extensively affected. Tubercle bacilli were not found elsewhere, as might be expected.

A Report of Cases of Measles. Walter Lester Carr *(Archives of Pediatrics,* Jan., 1899) presents some valuable data, gleaned from the study of an epidemic of measles and 115 cases. At first skeptical as to Koplik's prodromal sign, he subsequently proved it to be a valuable evidence of beginning measles. The average duration of the whole attack was 26 days. The average duration of the eruption was 7½ days. Fourteen deaths occurred, the causes being in 11 pneumonia, with other serious lesions; 3 of the pneumonia cases were lobar, and in 3 cases there was mixed infection found. On 7 there were careful autopsies made, and the whole paper is full of important, carefully-recorded data of a character useful to the student.

The Effect of X-Rays on the Skin.—Balzer and Mousseaux have observed that the action of the rays on the skin is far from being harmless, when long continued. In one case the skin of the right side, which was the one exposed to the X-rays, became red, thickened and eczematous. The nails fell off, and, when regenerated, were considerably altered. The hair of the right temple and the right eyebrow was destroyed, and in some places became bleached. This patient was exposed to the rays for a year.

THERAPEUTICS.

UNDER THE CHARGE OF
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The Efficacy of Guaiacol in the Treatment of Epididymitis. Perry *(Med. Rec.,* Jan. 7, 1899) reports a series of 20 cases, in which he painted over the cord of the affected side 1 c.c. of the pure drug, while over the scrotum 2 c.c. of a mixture: 1 part guaiacol and 2 parts glycerin. Twelve cases were severe, 5 sub-acute, and in 3 the testicles were involved. In many of his cases the pain was promptly relieved; in 2, only partially; another, in which the pain was not severe, was not relieved; in some, another application was needed. All were cured within 7 days, 3 within 3 days and 5 in 4 days. Seventeen were gonorrheal, 3 traumatic. Laxatives and suspensory bandages were also used, and in some oleate of mercury to hasten absorption of the inflammatory exudate.

Ichthyol in Phthisis. Schiele *(St. Petersburger Med. Wochscht.,* Feb. 20) has used it in four cases, in which creasote had entirely disarranged the digestive system, with good results in each. Ichthyol, through its sedative, alterative and antiparasitic actions, has been recommended in almost every disease, and therefore should meet the requirements for use in phthisis. The best mode of administration is by giving one of the salts (ammonia or soda) in combination with ichthyol-sulphuric-acid. Both are soluble in water, and can be mixed with other drugs as the case may need. The author used the ammonia salt and began with 3 to 5 drops, and increased to 20 or 25 three times a day, before eating.

Schleich's Mixture for Anesthesia. Lathrop *(Univ. of Pa. Med. Mag.,* Vol. XI., No. 5) reports 150 cases in which he used these mixtures with satisfaction. He believes that they are as safe as ether (the sheet anchor of safety during the past); and although he admits that some cases are troublesome under their influence, he has not found them to be so frequent. He points out that many, who have tried them, have discontinued their use without a sufficient trial, and have pronounced them dangerous from a lack of experience. The mixtures used by him were:

No. 1.—Chloroform,	1⅓ ℥	Boiling point, 38° C., or 100° F.
Sulphuric ether,	6 ℥	
Petroleum ether,	½ ℥	
No. 2.—Chloroform,	1⅓ ℥	Boiling point, 40° C., or 104° F.
Sulphuric ether,	5 ℥	
Petroleum ether,	½ ℥	
No. 3.—Chloroform,	1 ℥	Boiling point, 42° C., or 107° F.
Sulphuric ether,	2⅔ ℥	
Petroleum ether,	½ ℥	

They were administered by an Allis inhaler, a few drachms being poured upon it, and when the patient was under the influence, a towel was placed over it, and a few drops of the mixture added from time to time. No. 3 was most efficient in operations around the head and neck. He agreed with the majority of other authors in regard to the rapid going under and coming out, boiling point of mixture in relation to body temperature, etc.

Diphtheria Antitoxin. Warbenweiler (*Corr.-Bl. für Schw. Aerzte*, No. 17, 1898) sums up his experience in the following words: "I who was a Saul have become a Paul, and even if I should have an unfavorable case, my new-found faith would not be shaken." He gives a short account of 51 cases treated with antitoxin, and 38 prophylactic injections, observed during the fall and winter of 1897 to 1898. His patients all recovered. The epidemic appears to have been a severe one, whole families being attacked by the disease, but the treatment was so uniformly successful that the community (a small Swiss village) began to doubt that it really was diphtheria, because no one died. Fortunately, the writer says, their faith in science and in their doctor was somewhat restored by the fatal issue of two cases, in one of which the treatment was not used at all, and in the other only after the patient was beyond all hope. All but one of the children treated with a prophylactic injection escaped infection.

PATHOLOGY AND BACTERIOLOGY.

UNDER THE CHARGE OF

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"Typhoid and Typhoidal Complications" (De quelques Observations Bacteriologiques Faites a la Clinique Medicale de l'Universite de Liege). Masius and Nolf (*Annales de la Soc. Med.-Chirurg. de Liége*, Janvier, 1899) report two interesting typhoid complications. (1) Typhoid fever in a child, *aet.* 10 years, complicated by general typhoidal infection, the bacillus typhosus having been demonstrated as present in the blood during life. The symptoms presented were: Temperature oscillating between 39.8°C. and 40.4°C., which appeared to be influenced by quinin; rapid pulse, reaching 140; profound prostration; delirium; great tympany; subsultus tendinum; carphologia. There was a point of osteomyelitis situated on the lower end of the right femur. This was associated with tumefaction of the periosteum, which was very painful on pressure. Blood taken from the bend at the elbow, and inoculated upon bouillon and gelatin developed about 30 colonies of the typhoid bacillus in each cubic centimeter.

The time of dissemination of the bacillus was inferred by the sudden rise in temperature and pulse rate, and by the fact that the diazo-reaction, which had begun to disappear, suddenly became marked and remained so until death. The day of the disease on which the dissemination occurred is not given. The patient died; and the authors believe that all cases of typhoidal septicemia are fatal. (2) The second case is one of abscess of the kidney, developing in the beginning of the third week of typhoidal attack. The patient entered the hospital October 16th, and on October 20th there was a sudden increase of albumin in the urine, followed by a temperature oscillating between 37° and 39°C. On October 29th there was intestinal hemorrhage, which came very near being fatal, followed by subnormal temperature. Up to November 9th the urine, which had been clear, became suddenly cloudy, and showed on sedimentation a large amount of pus without casts or blood cells, but containing slender agglutinated bacilli. Necrotic portions or renal tubules and glomeruli appeared in the urine. The inferior extremity of the right kidney was palpable, and after what was believed to have been the rupture of an abscess the organ diminished in size. The patient recovered. (3) The same authors report a case of malarial infection associated with or followed by tuberculosis; and (4) also a case of bacteriuria in which the only organism found was apparently the bacillus subtilis. The authors believe that the bacillus subtilis entered the circulation by the alimentary canal, was excreted by the kidney and developed in the albuminous urine. The patient had had symptoms of fibrous kidney for an uncertain length of time. Under proper treatment, the albumin disappeared from the urine, and with the disappearance of the albumin the bacillus was also lost sight of.

Parasite of Syphilis. In *La Presse Med. Belge,* Dec. 11, 1898, is an abstract of the report made by M. Winkler and presented to the Society of Biology, of Hamburg, Oct. 11, 1898. The technic of the examination consists in removing any crust which covers the initial lesion, drying its surface and gently compressing the tissue so as to cause a small amount of fluid to be expressed from the surrounding tissue. This fluid is spread upon a cover-glass and fixed by alcohol. The cover is then stained with thionin or toluidin blue, and decolorized in formalin. Unfortunately, the strength of the stain and decolorizing mixture is not given. Another process is to stain with polychromatic methylene blue, decolorize by means of iodized alcohol, or Unna's ether glycerin mixture. The bodies described consist of small spherical corpuscles, clearly limited, and surrounded by faint areola, sometimes divided in two by very fine lines. In this communication the size of the corpuscles is not given. They are found in the chancre, syphilitic papules, condylomata, syphilitic glands, and gummata. Exactly what the bodies described may be, is not as yet determined. Unna is stated to have accepted the deductions of Winkler, and considers the finding of the bodies of diagnostic value.

CLIMATOLOGY AND HYGIENE.

UNDER THE CHARGE OF

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Distribution of Tuberculosis in Ireland. *(Brit. Med. Jour.,* Mar. 18, 1899.) In a paper before the Royal Academy of Medicine of Ireland, Dr. P. Letters showed that tuberculous disease throughout Ireland —tabes mesenterica and tuberculous meningitis more so than phthisis— was regulated almost exclusively by aggregation of population. Small towns and villages bred tuberculosis largely. He controverted all theories referring the prevalence of Irish tuberculosis to meteorological or climatic causes, or to the proportionate amount of bog and barren mountain land, to surface elevation, or to geological formation. These did not operate as influential factors, or their effects could not be measured by death-rates recorded over large areas. In the counties, death-rates per million living from (1) tabes mesenterica and tuberculous meningitis combined, and (2) from phthisis, corresponded so closely with the several degrees of urbanization as to leave no reasonable doubt of a causal relationship. This line of argument led to the conclusion that tuberculosis, as found in Ireland, was essentially a town-bred and village-bred disease, exclusively rural localities showing next to no mortality from tabes mesenterica and tuberculous meningitis, and greatly reduced death-rate from phthisis. The most tuberculous region in Ireland extended along the eastern and south-eastern seaboard, and was mapped out by the counties of Antrim, Down, Dublin, Wexford, and Waterford. The least tuberculous was found in a compact region in the northwest, comprising the five contiguous counties of Donegal, Leitrim, Cavan, Fermanagh, and Longford. These two regions contained respectively a high and a low percentage of urban population. A table giving the percentage of inhabitants of towns over 500 to the total population in each of the 32 counties showed that, where the town-dwelling population was high so also was tuberculosis, and *vice versa.*

Frequency of Injurious Meteorological Phenomena. *(Monthly Weather Rev.,* Feb., 1899.) The cause and probable continuance of any unusual frequency of storms or frosts cannot at present be definitely stated. If the records of these phenomena were precise and definite, and extended over many years, for any given locality, we could calculate the probability that two or more would accidentally occur within a short period of time. Such computations have been made for other places, and have shown that there is no reason to think that a rare combination of years of disastrous meteorological phenomena will recur more than two or three times in a

century. In our inability to analyze the exceedingly complex interaction of the ocean, the land and the atmosphere we ordinarily say that, so far as we are able to see, the occurrence of unusual combinations of weather is governed by the laws of chance. By this we simply mean that the laws of chance will tell us how many such combinations will occur in a century just as well as would the natural laws that we know must govern them. But the physical laws will give us the years and dates of the occurrence, whereas the mathematical laws of chance simply give us the statistical frequency of occurrence. Both these laws, however, will agree in showing that unusual combinations of events in one year will not be followed by similar combinations several times in rapid succession.

SURGERY.

UNDER THE CHARGE OF

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The Treatment of Appendicitis. Broca *(Gaz. des Hop.,* Jan. 17, 1899), in a discussion before the Surgical Society of Paris, says that in cases where a general peritonitis is diagnosed, operation should be undertaken as soon as possible. Although the patient usually dies, he has had 4 recoveries in 31 such cases that he has operated upon. In regard to immediate operation in all cases he says that that was his original plan, but gradually he found that if the patient was not threatened with a general peritonitis immediately, and if there was no signs of a localized collection of pus, medical treatment, with careful observation of symptoms and operation as soon as local or general symptoms indicated its necessity was preferable. Of course great care and skill are necessary in observing the symptoms, for operation must not be delayed after the symptoms indicate the necessity, or the patient's chances of recovery are greatly decreased. During such medical treatment, the fever will fall, while the inflammatory thickening will decrease. The formation of abscesses in unusual locations is very difficult to diagnose, yet the symptomatology of this condition is so well known that few should now be unable to detect the abscess as soon as it forms. The author believes it bad surgery to seek for the appendix and remove it at all costs in every case, or to break up adhesions in order to remove it at once. If it presents, it should of course be removed. The adhesions are the safety of the patient. The incision and evacuation of the abscess saves the patient's life. He does not, however, believe that in all cases nature takes care of the appendix. Where there are symptoms that indicate it, the appendix should be removed at a subsequent operation.

The secondary operations prevent relapses, and the approximation of the abdominal incision as obtained in such operations prevents hernia. These operations are as benign as they are necessary, but he would not counsel operation in all cases where there have been attacks of appendicitis. If there is no tumor and no tenderness or pressure he would wait for their indications before operating. He prefers the direct incision, and reserves the dissecting up of the peritoneum in the iliac fossa for cases where the abcess is situated in the true pelvis.

The Results of Open Operation in the Treatment of Recent Fracture of the Patella. Charles Phelps *(The New York Med. Jour.,* Dec. 17. 1898) finds that his 118 operations show that open operation is not only free from danger when it is properly performed, but it also secures the best functional results. The author believes that osseous union can be obtained, and is obtained, in every case where the patient is free from specific taint and the open operation is performed with strict aseptic results. This belief has been strengthened by *post-mortem* in some of his own cases months after operation, and by observations made in the *post-mortem* room and on the dissecting table, in cases where the buried silver wire suture has been found *in situ,* proving the previous operation. In those cases where the open operation has been done, the function of the joint is completely restored; extension is complete as well as flexion. A further advantage of operative treatment is the early period at which passive motion can be commenced. The time before the patient can commence to use the limb is much shorter. Where the fragments are coapted by silver wire, the author usually removes all retentive apparatus, begins flexion and permits the patient to walk with the aid of a cane on the twenty-eighth day. The cane is discarded a few days later. The author's method comprises free lateral incision, ablution of the joint by irrigation, and, after the removal of the interposed fibrous tissues, coaptation of the fragments by silver wire, and closure of the joint cavity by soft sutures through its fibrous covering. He has found that this operation is convenient, and produces perfect results. The after treatment is important. Movement of the joint should be begun early, and the case kept under observation until flexion has been carried beyond 90°. Lateral movement of the patella should begin at the end of the third week; if neglected, the bone may become fixed to the femoral condyles and be liable to refracture in the effort at flexion. In both lateral movements and flexion firm support should be given to the upper and lower borders of the bone.

The Use of Orthoform in Calomel Injections.—Dr. Daulos advises *(Klin. therap. Woch.)* the employment of orthoform in injections of calomel. He uses the following formula:

Calomel,	0.05
Orthoform,	0.08
Ol. vaselini,	1.c.c.

This combination renders the injection painless. The orthoform can be increased in the dose, as it is not poisonous.

LARYNGOLOGY AND RHINOLOGY.

UNDER THE CHARGE OF

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On the Importance of Removing Adenoid Vegetations from the Fossae of Rosenmuller. Gibson *(Intercolonial Med. Jour., of Australia,* Vol. IV., No. 2, 1899) states that the presence of these growths in the above-mentioned locality has been denied by competent authority. His own personal observation confirms his earlier views as to their frequent occurrence in the fossæ. A small bunch of adenoid growth in this locality interferes far more with Eustachian patency than more extended growth in the vault or elsewhere. Unilateral deafness may be often traced to this cause. Bridges of tissue between the tubal prominence and the posterior pharyngeal wall have been seen and removed. The author's mode of operation is to tie the palate forward with feeder tubing, and, under cocainization, using No. 4 laryngeal mirror to guide Löwenberg's forceps, with patient in sitting posture, to locate and remove the offending structure. Improvement of hearing has been prompt and satisfactory in every instance.

Intra-Tracheal Injections of Carbonate of Creosote (Des Injections Intratrachiales de Carbonate de Creosote). Bayer *(Rev. Hebdom. de Laryngol., etc.,* No. 9, 1899) prefers for these injections carbonate of guaiacol, obtained by the combination of CO_2 with chemically pure beechwood creosote. The preparation, if pure, is a white liquid of a syrupy consistence at ordinary temperature, which becomes quite fluid when gently heated on a water bath. The odor is mild, and feebly suggests that of creosote. It produces no reactionary inflammation in mucous membranes. It is composed of 90 to 92 per cent. of creosote to 8 to 10 per cent. of carbonic acid. With the syringe used for laryngeal injection, he introduces through the larynx into the trachea ½ to 1½ c.c. of the liquid, which should be gently heated. The injection causes no irritation, and is well borne by the most sensitive patients, who are told to breathe deeply to facilitate as far as possible its penetration into the bronchi. He has obtained some startling results from even the first injection in combatting the "bad breath" that originates from advanced disease (tubercular, etc.) of the lungs and also in modifying and lessening the secretion.

Physiologic Nasopharyngeal Extract: Its Application in the Treatment of Pulmonary Tuberculosis (De l'Extrait Physiologique Nasopharyngien et de son Application au Traitement de la Tuberculose Pulmonaire). Fauvel *(Gaz. de Hopit.,* No. 4, 1899)—assuming the view that the nasopharyngeal mucosa secretes the principles des-

tined to ward contagion from the respiratory tract, and the fact (which is far from being proved as the editor believes) that "the methodical examination of tubercular patients and questioning as to their antecedents always demonstrates that the tuberculosis first attacks the upper respiratory tract, descending thence by the bronchi to the alveoli"—conceived the idea of injecting into patients with tuberculosis the physiologic extract of the nasopharyngeal mucosa of the kid or lamb. Experiments on animals showed gain in weight and vigor after injection. The same held good in the treatment of man.—(Brindel, *Rev. Hebdom. de Laryngol., etc.,* No. 7, 1899.)

OPHTHALMOLOGY.

UNDER THE CHARGE OF
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Congenital Ptosis with Associated Movements of the Superior Eyelid and the Inferior Maxilla. Coppez *(Jour. des Sciences Méd. de Lille,* Jan., 1899) reports his second case of this curious anomaly. The first case was in a young girl, presented to the *Societé Belge d'Ophthalmologie,* November, 1897. The second case was in a young man of twenty, who, in a state of repose, exhibited a typical case of ptosis, the right lid falling lower than the left. When, however, the patient moved the lower jaw toward the left, the eyelids raised and the right interpalpebral fissure became actually larger than the left. The same phenomenon appeared when the lower jaw was depressed, as in opening the mouth or in eating. Although this anomaly is rare, Gunn, Sinclair and others have described it. Coppez attempts an explanation, by a consideration of the anatomy and physiology of the innervation of the parts involved.

"Letter" without "Word" Blindness. Hinshelwood *(Lancet,* Jan. 14, 1899) reports five cases which he claims make it quite clear that there is a distinct variety of "letter blindness" in which the individual, though able to read words, cannot read the separate letters of which the words are composed. Recorded cases of this nature are rare. Bramwell, who reported a case, had never heard of another like it. However, the author believes that the rarity is due to their non-recognition, the examiner usually being satisfied if the patient can read words, and not examining for the constituent letters. Hinshelwood has already described a class of cases in which the patient could read letters, but not words. He therefore believes that he has been furnished with full clinical evidence that there is complete interdependence of the visual memories of letters and of words, and this complete functional independence can only be reasonably explained on the assumption that these distinct groups of visual memories are stored and preserved in different but probably contiguous areas of the

cerebral cortex. In other words, he believes there is within one center three distinct areas, occupied respectively with visual memories of numbers, words and letters.

Monocular Diplopia and Polyopia. Ryerson *(Canadian Pract.,* Jan., 1899) says that for purposes of description, cases of monocular diplopia may be divided into three classes: (1) Those dependent upon errors or diseases of the refractive media; (2) those caused by diseases or injuries of ciliary body or iris; (3) those dependent upon disorders of the central nervous system or of the nervous apparatus of the eye. (1) Of the first class, refractive errors and diseases of the lens and cornea, astigmatism, more especially irregular astigmatism, are important causes. Opacities of and facets on the cornea similarly cause diplopia. Growths and connective tissue bands in the vitreous and segmentation of the lens are other causes. He had a patient with segmentation of the lens, who could see five moons with one eye. Traumatic or congenital dislocation of the lens is always attended by monocular diplopia. (2) Blows upon the eye, resulting in partial rupture of the zonula of Zinn or partial paralysis of some portion of the ciliary muscle, causing irregular contraction, also produce diplopia. Other causes are trauma of the iris with peripheral detachment (iridodialysis), or following badly performed operations, or synechiæ after iritis. Persistent pupillary membrane does not cause diplopia, "probably because the mind has unconsciously been trained to ignore the double image by long usage." (3) Of the cases dependent upon neurotic disturbances or cerebral lesions, the author reports two of considerable interest, and urges that ophthalmic writers pay more attention to this class of cases, as but scant mention is made in the majority of text-books upon ophthalmology.

GENITO-URINARY SURGERY AND VENEREAL DISEASES.

UNDER THE CHARGE OF

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Tuberculosis of the Bladder. McGrath *(N. Y. Med. Jour.,* Jan. 21, 1899) reports a case of tuberculosis of the bladder in the male, cured in six weeks by a suprabubic cystotomy with daily irrigation thereafter until the wound healed spontaneously. The mucous membrane of the bladder had been studded with tubercles, and several small ulcers were

present at the base. The cystoscope, he says, is not as useful in this disease as might be expected. Its use, in the first place, causes great pain in tubercular cystitis, and then the urine in these cases is cloudy and bloody, and although the bladder is well washed out beforehand the bleeding is apt to continue and obscure the view. In women the urethra may be dilated and the bladder examined with a finger. It is better to operate early, when a diagnosis has been made, than wait until micturition has become incessant and the kidneys involved by the tubercular process. The treatment of the ulcers at the time of operation varies with the operator. Some use the curette, others the Paquelin cautery, and the application of iodoform has its advocates. The general health should be looked after and the lungs examined, though a tuberculous lesion here or elsewhere does not contraindicate the operation, excepting, of course, in advanced cases of pulmonary tuberculosis, etc.

Gonorrhea and its Complications. Waterhouse *(The Practitioner,* March, 1899) says he has learned to rely on the presence of gonococci in a suspicious discharge only when the cocci are found in groups *within* the pus cells. Otherwise, he questions the presence of gonococci; and confirms his views by the fact that gonococci cannot be stained by Gram's method, while the pyogenic cocci can. The mistake is not as likely to be made in the acute form of gonorrhea, when the micrococci are numerous, as in the chronic forms, when the gonococci are few and mixed with other micrococci. Writing of epididymitis, he says: "When the pain is intense, tincture of aconite will be found invaluable; three minims of the tincture at once and one minim every half-hour until the pain ceases or the heart is affected. Tartar emetic may be employed in the same cases, but I have found it acts more beneficially in prostatitis than in epididymitis. The patient while taking these drugs requires very careful watching. In the rare cases when the pain does not yield to this treatment, leeches applied over the spermatic cord in the inguinal region will certainly cause a cessation of the pain after the abstraction of a half-pint of blood." Gonorrheal rheumatism follows in about three per cent. of all cases of gonorrheal urethritis. Two characteristics of gonorrheal rheumatism are: The attacks tend to lapse into a chronic stage, and the condition is very resistant to treatment. Tonic treatment, strychnin, quinin and iron, in combination especially, exert the best influence, salicylates and iodides are useless.

Colles' Law. Shaw-Mackenzie *(Lancet,* Feb. 25, 1899) claims priority for W. Wallace as regards the law that "the child born of a mother who is without any obvious venereal symptoms will infect the most healthy nurse, whether she suckle it or merely handle or dress it; yet this child is never known to infect its mother, even though she suckle it while it has several ulcers on the lips and tongue" ("Colles' Law"). Shaw-Mackenzie holds that Dr. Wallace wrote in the *Lancet* of 1833-37. The question of priority, however, is of minor importance in comparison with the observations and interpretations of Wallace. Not only does his work throw light upon the nature of immunity in the mother from innoculation experiments, but also upon that of reinfection in exceptional and similar cases.

GYNECOLOGY.

UNDER THE CHARGE OF

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On the Prevention of Sepsis after Laparotomy in Uterine Operations. Crede *(Med. Review,* Feb. 8, 1899) discusses the difficulty in employing the various antiseptic agents in irrigation of the abdominal cavity in sufficient strength to be of service without doing serious injury to the patient, and advocates the embedding of soluble metallic silver, the argentum colloidal in the most septic portions of cavities and wounds. He first employed millet-, or pea-sized masses of the metal, but soon noticed that in this form it was slowly penetrable by fluids, only a small portion of silver being dissolved. After lying from five to eight days in the wound cavity, it became an insoluble metallic silver. To obviate this, he mixed the silver with an equal quantity of sugar of milk and a trace of glycerin. The following operation explains his method of using it. In a case of resection of the transverse colon about 6 inches long, with corresponding portions of the large and small omentum, for exulcerated cancer of the intestine, after fastening the Murphy button and making a Lembert suture over it, he washed the external and internal field of operation with a gentle stream of $^1/_{8000}$ citrate of silver solution, then, drying with sponges, dusted the suture line lightly with citrate, and with Lister forceps placed two silver pills in the wound, about 5 or 6 cm. apart, above and below the resected intestine, then closed the abdominal cavity in the usual way. The highest temperature following was 100.8° F. He had never seen any trouble following this prophylactic embedding of the silver. In infectious peritoneal cases—as infection of the gall-bladder and appendix, carcinoma of the peritoneum—the purulent secretion becomes serous in a surprisingly short time under the treatment. Drainage is insured by the use of silver gauze. This colloidal silver is soluble in serum in proportion of $^1/_{25}$ and remains in solution in albuminous fluids in spite of the salts they contain. If the pure silver solution anywhere comes in contact with pathogenic cocci, lactate of silver is formed, and exercises its antiseptic property. Of 16 cases operated upon, 15 were discharged as cured. One died five and one-half weeks after the operation from acute tuberculosis of the lungs. Catgut and silk are also prepared by being placed in a solution of lactate of silver $^1/_{100}$, in which the catgut remains for one week; it is then removed, placed in a large glass vessel, covered with glass and exposed to the brightest possible light. Lactate of silver is reduced to metallic silver, the fibers become brownish-black, then washed in water until the water comes away clear, placed in a large glass vessel and covered with a double layer

of muslin. After 2 or 3 days' drying it is straightened out with carefully washed hands, cut in 12-inch lengths, and tied in bundles. It is kept protected and before used placed for fifteen minutes to an hour in alcohol. Catgut is thus sterilized. Silk is kept in a solution for 14 days and should be placed in alcohol before it is used.

Post-Operative Insanities and Undetected Tendencies to Mental Disease. Hurd, of Baltimore, Md. (*Amer. Jour. Obstet.*, March, 1899), says post-operative insanity is a complex affair, comprising symptoms which may differ in cause, manifestation, course and termination. There would be little excuse for the use of the term were it not for the existence of infectious processes accompanied by delirium or prolonged depression. Septic infection excluded, in a case destitute of any tendency to insanity, there is no reason to think that the operation *per se* produces mental disease, or that the insanity bears a causative relation to it. There are disturbing factors in a surgical operation which may obtain to produce an insanity; but the latter must be considered post-operative in point of sequence, rather than of causation. Prolonged use of anesthetics has produced excitement, delirium, mental confusion, often prolonged alienation, without any operation whatever. Instances are not uncommon where, following an operation, excitement has followed the local application of iodoform, instillation of atropin or administration of salicylate of sodium, and, notwithstanding the surgical operation, the symptoms of insanity subsided upon the withdrawal of the intoxicating agent. Mental symptoms following an operation may be clearly ascribable to shock, loss of blood, excessive exhaustion, long-continued vomiting from anesthetic, or absence of food, owing to anorexia. There may be poison in the blood and interference with proper cerebration from defective action of the kidneys, due entirely to the withdrawal of water by the mouth, lest it may excite vomiting after the operation, or the anesthetic may cause a transitory nephritis with accompanying loss of kidney function. Removal of the ovaries may occasion premature climacteric insanity in the form of melancholia, with delusions or depression and apprehension, and lowering the vitality which accompanies this functional disorder, or more rarely we may have a prolonged attack of maniacal excitement. In a similar manner we may precipitate senility or rapidly increasing dementia by the removal of the thyroid glands. Occasionally a slight operation, involving no greater amount of pain, discomfort, prolonged anesthesia or mental worry, has resulted in the development of decided mental symptoms. The explanation of such development is that the operation has been done in neurotic patients to relieve symptoms which are clearly nervous in character. The physician who carefully studies his patient before subjecting her to operation will be slow to operate for the relief of pain. Mental and physical pain are frequently developed in connection with various forms of nervous prostration, and relief is not obtained in these cases through operation. Scarcely a week passes that application is not made for the admission of patients to the gynecologic department of Johns Hopkins Hospital for uterine disease, where observation discloses the symptoms to be nervous in

character. Where mental disease has developed subsequent to the operation, it will often be found that the patient had a strong hereditary tendency to insanity derived from an insane, intemperate or neurotic ancestry.

OBSTETRICS.

UNDER THE CHARGE OF
EDWARD A. AYERS, M.D.,
Professor of Obstetrics, New York Polyclinic and Attending Physician to the Mothers' and Babies' Hospital,
ASSISTED BY
GEORGE G. WARD, Jr., M.D.,
Instructor in Obstetrics, Cornell University Medical College and Long Island College Hospital. Instructor in Diseases of Women, New York Post-Graduate Medical School.

Eclampsia with Special Reference to the Value of Normal Saline Solution. Brown *(Richmond Jour. of Practice,* Jan., 1899) reports a case of eclampsia treated in the usual way by nearly all general remedies used in this condition, including bleeding, without result. Saline injections, hot, into the rectum, were employed and kept up for a period of 36 hours with a marked and happy effect noticed at once. Recovery followed.

Care and Repair of the Female Perineum. Larkins *(Jour. Amer. Med. Assoc.,* Feb. 11, 1899) reviews the well-known causes of lacerations during labor, and quotes Goodell's method of hooking up and pulling forward the sphincter ani by passing two fingers into the rectum during the perineal stage of delivery, and its advantages. He then advocates dilating the sphincter ani as for rectal operations, and claims marked results in the way of relaxing the perineum and thus preventing lacerations. The author does not believe in immediate repair of pelvic floor injuries, but advocates a delay of 6 to 10 weeks when, he argues, the tissues will be over their bruising and in a better condition to unite.

Dangerous Thinning and Elongation of the Lower Uterine Segment—Including Three Cases of Rupture. Dickinson *(Amer. Gyn. and Obstet. Jour.,* March, 1899) reports 6 cases with 8 illustrations. Case 1 was a breech, and was extracted without difficulty. A transverse sulcus was felt in the uterine wall above the level of the umbilicus by abdominal palpation. Through the vagina, high up in the uterus, a well-defined constriction was prominent 12 to 13 inches from the vulva, by actual measurement after delivery. Case 2 was one of hydrocephalus, with extreme thinning and rupture of the uterus into the bladder 3 inches above the external os. Case 3. High retraction ring from elongation of the vaginal walls. Twins—second child transverse; retraction ring was at the navel; thinning was entirely of the vagina. Case 4. Over-distended vagina, causing prominence above pubes, with rent in posterior fornix. Prominence was thought to be overdistended bladder:

Catheter proved it was not. Case 5. Rupture of uterus, with very long injury. Subsequent easy labor. Occipito posterior, forceps applied for two hours and a half by two physicians, with no result. Tarnier forceps were applied, and extraction was simple. A rent in the posterior wall of uterus and vagina, admitting the hand to the peritoneal cavity, was found. Was four months in bed with fever. Became pregnant again. Thick, solid scar found adherent to sacrum. Delivered small child easily at term. Scar then examined and found to extend to fundus. Case 6. Retraction ring below navel. Version possible in arched dorsal posture.

Some Causes of Maternal Dystocia. Cutts *(Northwest. Lancet,* Feb. 1, 1899) says: Some common factors in producing dystocia are: First, obliquity of plane of superior strait of pelvis to axis of the body; second, lordosis of lumbar vertebrae and more especially the undue prominence of the last lumbar vertebra; third, condition of the pubes, as obliquity of the plane of the pubes to the plane of the superior strait of the pelvis, length of the pubes and sub-pubic ligament, and thickness of the pubes. Reports two cases illustrating some of the above causes.

The Combined Wendelenburg-Walcher Posture in Obstetric Operating. Dickinson *(Amer. Jour. of Obstet.,* Dec., 1899) illustrates his article with 23 excellent drawings. A combination of the two postures enables one to obtain results impossible with either alone. The position is readily obtained by the use of a common kitchen chair, the rungs between the rear legs being removed. The chair is inverted, making an inclined plane, and the buttocks are made to project beyond the edge of the seat, the patient's legs spreading widely apart outside of the chair legs, and she is prevented from slipping by a sheet slung over her shoulders and attached to the chair. The direction of the canal formed by vagina and cervix is more direct and nearly level, and the true conjugate is enlarged to the utmost by the Walcher posture. The position is compared with the other positions in common use; the angle of the inlet with the horizon is about 60° and the increase of the true conjugate about 1 cm. Thus, high forceps version, or other intra-uterine manipulation is greatly facilitated, as the objections to the Walcher posture, that the axis of the inlet is nearly vertical and thus awkward, is entirely overcome, while its advantages are retained. Some useful hints as to how and how not to apply the sheet sling are very aptly shown by illustrations. The angle of the plane of the inlet with the horizon as produced by various postures is also well depicted.

A Case of Multiple Pregnancy. Drennan *(Amer. Jour. of Obstet.,* March, 1899) reports a case of triplets in a woman 25 years of age. Five months' gestation, labor brought on by a fall. First child healthy and gasped; second and third fetuses had been dead some time. Two placenta, one small, with two cords, shriveled and evidently detached from the uterine wall for some time, the other placenta was of good size and condition, and had to be removed from uterus. The fall the patient sustained evidently affected the placenta supplying the two fetuses, causing the premature labor and sacrificing the other child. All the children were males.

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Sudden Deaths among Eminent Physicians.

Taking as a text the sudden death during the past year of six prominent physicians of the United States, including Pepper, Hamilton, Larrabee, Owen, Rohe and Etheridge, Dr. I. N. Love, editor of the *Medical Mirror,* preaches a timely sermon on the need of more attention to diet and personal hygiene in the medical profession. He alleges that all the above-named men died suddenly, and forty years before their time. He insists also that "every one of them died as a result of atheromatous degeneration from preventable causes," the causes having been overwork, irregular eating, and other violations of well-understood hygienic laws. Granting the truth of the foregoing premises, there seems to be some warrant for the following jocose conclusion by Dr. Love:

"The old saw, that every man is either a physician or a fool at forty, is true; but the trouble with the members of our profession is that at forty the most of us are both physicians and fools."

In recent public utterances Hunter McGuire, of Richmond, and Whittaker, of Cincinnati, have advised in effect that in the latter half of life, especially when gout or arterio-sclerosis threatens, we should take in sail and do less work; that we should eat very sparingly of meat, make a very free use of milk, vegetables and fruits, and especially take plenty of exercise. When either of the above diseases has become established, we should wholly avoid meat and coffee, and, Whittaker says, abstain from alcohol altogether. McGuire, who has cured himself of gout by dieting mainly, drinks no wine or beer, but finds that a little whiskey does not hurt him. These may be considered trite and well-worn truths by some, but multitudes of doctors disregard them, not only in advising their patients, but also in regulating their own way of living, which ought to be equally important to them.

Prof. Potain, of Paris, also has been giving some good advice for the old fellows. In a recent lecture, he discussed atheroma of the arteries in a

most interesting and practical vein. He held that, while the prognosis of this disease is always serious, it is curable in the beginning. By way of treatment he recommended especially iodid of sodium in doses of about five to ten grains, insisting that these moderate doses are better tolerated, and generally quite as effective as larger ones. After three weeks of this medicine he would substitute Dioscoride's granules of arsenic. These two drugs he would then have administered in alternation and apparently for long periods. He spoke favorably also of quinquina as a remedy for the same affection.

The Treatment of Atheroma.

As regards the hygienic precautions desirable for elderly men, and for others whose arteries are older than their years, Potain is in practical accord on most points with our American teachers above quoted. He advised a moderate exercise of all the functions as beneficial, but warned emphatically against all excesses, adding: "You will then recommend your patients to avoid grand dinners, as well as much drinking, and also intellectual labor"—meaning doubtless mental strain. After further cautioning against violent emotions and the pursuit of pleasures which belong to the young only, Potain summed up with the aphorism that "The way to escape the accidents of atheroma is to recommend moderation always, excitement never."

Advice of this kind should be taken to heart by physicians who, whether from the lapse of years or from the excessive strain and anxieties of their lives, find their breath getting a little shorter and their arteries growing longer, as shown by the crinkly tortuosities of their temporals and other superficially located vessels. If they will heed such significant warnings in time, and slacken their pace before it is too late, they will be spared the longer to their families and friends.

Atheroma or arterio-sclerosis and gout are nearly akin, the latter being a frequent cause of the former. At a recent meeting of the Harveian Society of London, Dr. Mouillot, of Harrowgate, read a paper entitled "Modern Views on Gout in Relation to Treatment," and this always interesting subject was ably discussed by a number of leading clinicians. Both the paper and the discussion on it we find reported quite fully in the *Medical Press and Circular* of March 29th. Mouillot considered it sufficiently evident that in gout there is a loss of the balance between production and excretion and that we may assume a relative inadequacy on the part of the kidneys to eliminate all the uric acid formed. He did not, however, assent to the new doctrine that uric acid is produced as well as excreted by the kidneys. As both the supposed antecedents of uric acid, urea and glycocin, are made in the liver, he held it to be probable that their conjugation takes place there also. The recent investigations of Chalmers Watson, showing the presence of uric acid in the blood of birds, contrary to Luff's negative results in this respect, and

A Notable Discussion on Gout.

the experiments of Minkowski on geese, were considered by him as pointing strongly to the hepatic orgin of uric acid.

Mouillot further expressed the belief that the proximate cause of the gouty state lies in a defective metabolism of proteids due to a functional disease of the liver or intestinal glands. In the way of treatment he favored colchicum and the natural alkaline waters.

Bezley Thorne, in opening the discussion, laid great stress upon the role of gastro-duodenal catarrh in the etiology of gout, through the fermentative changes and pancreatico-hepatic obstruction secondarily set up. He gave an account of his own personal experience in fighting for many years a strong inherited tendency to uric acid excess. Attacks of migraine increasing in frequency up to two or three times a week, and two accesses of what would now be called appendicitis, marked the worst period of his malady and indicated the extent and variety of the systemic infection. After following Haig in avoiding meat altogether for an entire year, he finally adopted a diabetic diet, foreswore saline laxatives and took to drinking two pints of water daily between meals. This has proved completely successful in restoring him to health. He had treated the digestive organs meanwhile with bismuth and soda, and found it necessary to continue these during the succeeding seven years in order to prevent relapses.

Considering the clinical history of his case as reported by himself, and the dietetic and medicinal treatment found effective in curing it, it would seem likely that gastro-intestinal derangement, involving apparently excessive fermentation and some intestinal catarrh, must have been the primary and predominant feature in it, the uric acid excess being a result, thus further confirming Mouillot's view as to the etiology of the gouty state.

Dr. Luff, who was present and participated in the discussion, opposed the employment of salicylates in gout as unnecessary, and in many cases harmful. He believed in the efficacy of the alkalies, though he did not think they dissolved gouty deposits.

Mr. William Armstrong advocated allowing some butcher's meat as necessary and especially helpful for the purpose of stimulating the excretion of uric acid. He insisted emphatically that red meats should not be partaken of at the same meal with milk and carbohydrates. Certain gouty cases could be treated successfully, either according to Haig's plan with an entire exclusion of meat, or in the opposite way by meat and hot water mainly without milk and carbohydrates. The important thing was not to mix the two classes of foods. In summing up this suggestive and instructive discussion, Mouillot expressed gratification over the very general confirmation of his view that the initial difficulty in gout was a digestive one, and hence the inability of gouty patients to digest a variety of foods at the same meal.

The practical lesson to be induced from the above summarized observations of our English confrères, as well as from the similar experiences of

many of us on this side of the ocean, is that a close attention to the digestive organs is the important requirement in the treatment of the gouty state, including a large proportion of the cases of so-called neurasthenia, and also of the gouty forms of arterio-sclerosis; and that the successful management of the primary digestive derangements hinges mainly upon the enforcement of simplicity of the diet and an abundant elimination through the bowels and kidneys. Another extremely important point, not apparently touched upon in the London discussion, is the necessity of moderate and carefully regulated daily exercise, active when the circulatory conditions permit, and otherwise passive in the form of massage and Swedish movements. Another point, which seems to have been missed, is that a frequent and careful study of the urine is helpful in preventing the development and aggravation of gouty conditions. The urine should be examined at not too long intervals, not only for an excess of uric acid and the usual familiar morbid constituents, but also for indicanuria and for an excessive total acidity, one or both of which will nearly always be found under such circumstances.

Von Noorden on the Treatment of Renal Diseases.

Among the valuable original papers contributed by our distinguished foreign collaborators, none has been of more scientific interest or practical importance than that of Prof. Carl von Noorden, of Frankfort, Germany, which appears in the present number of the INTERNATIONAL. It presents new views concerning the dietetic treatment of the chronic renal diseases, which seem to have been so well fortified by both clinical observations and experimental researches as to compel instant attention and probably a general acceptance.

Von Noorden is one of the most brilliant of the original investigators in a country in which original scientific investigation is more prevalent than anywhere else on the globe, being fostered and directly compensated in many instances by the government. He is also a clinician of large experience.

This remarkable paper deals more especially with the dietetic treatment of chronic contracted kidney. It explodes quite effectually the generally accepted idea that there is something particularly pernicious in the red or dark meats for persons with a tendency to rheumatism or gout, not pertaining to the white meats of poultry and certain animals; and rides rough-shod over the theory that the ingestion of an abundance of milk, water or other bland fluids to flush the kidneys is nearly always one of the proper things in chronic diseases of these organs. He shows that this method has gradually become established in practice without being sanctioned by any high authority, or warranted by any careful clinical or experimental investigations. His own experiments have demonstrated the decided harmfulness of drinking much water, especially in advanced cases of renal sclerosis.

We have quoted and discussed in the preceding editorial articles various opinions as to the diet appropriate to the gouty state and to the prevention and treatment of one of its sequelae—arterio-sclerosis. An equally serious ultimate result in many cases of frank gout, as well as of the obscure gouty state, is chronic interstitial nephritis, and von Noorden's authoritative utterance as to the most suitable diet in this affection comes in most opportunely to round out the consideration of an exceedingly interesting and vitally important group of closely associated subjects.

EDITORIAL MENTION.

"I SAID in my haste, All men are liars," exclaimed the Psalmist. The editor of the *New England Medical Monthly* irreverently suggests that "the Psalmist needn't have apologized, for if he had ever served through a venereal campaign, he would have said it at his leisure and stuck to it ever afterward."

DR. J. D. EMMETT, editor of the *American Gynecologist and Obstetrical Journal,* comes out with a vigorous editorial in the April number of that valuable publication, urging the importance of having in the cabinet at Washington a representative of physicians and the medical interests of the country generally. Upon assuming charge of the INTERNATIONAL MEDICAL MAGAZINE we promised to devote ourselves to assisting first and foremost in the great paramount work of improving and advancing the medical art, rather than to indulge in the fascinations of medical politics. Still, we don't mind saying briefly that we believe the Surgeon-General of the United States should be a cabinet officer with greatly enlarged powers. This is due not only to the dignity of our profession, but is absolutely necessary if the sanitary interests of the nation, including the army and navy, are to be properly safeguarded. There is just one way of effecting this object—physicians in all parts of the country must not only unite in demanding it, but unite in voting accordingly.

Obstetrics, the new journal of midwifery, which began its career in January last, has already won a creditable position in medical journalism. Its editor, Dr. Edward A. Ayers, Professor of Obstetrics at the New York Polyclinic, and a recognized authority in his special field, has consented to take charge of the department of Obstetrics of the INTERNATIONAL MEDICAL MAGAZINE, with the co-operation of Dr. Geo. G. Ward, Jr., of New York. Dr. Ayers will also favor our readers from time to time with practical talks on the subject of midwifery.

BOOK-REVIEWS.

THE INTERNATIONAL MEDICAL ANNUAL AND PRACTITIONER'S INDEX: A WORK OF REFERENCE FOR MEDICAL PRACTITIONERS. Seventeenth Year. New York, E. B. Treat & Co., 241-243 West 23d Street; Chicago, 199 Clark Street, Price, $3. 1899.

This compact octavo volume of 758 pages is very much more than an "annual" or alphabetic array of condensed abstracts of the new things which have been brought forward in the medical world during the last year. It is by far the most complete and best arranged of all the single volume year-books of medical and surgical progress, and in addition, by using a small but clear and easily read type, the publishers have managed to find room in it for a number of very interesting special articles or short monographs describing our present knowledge of the subjects of most practical importance to both physicians and surgeons.

These include an admirable "Atlas of Bacteria Pathogenic in Man, with Descriptions of their Morphology and Modes of Microscopic Examination," illustrated by seven unusually fine colored plates, by Samuel G. Shattock, F.R.C.S.; "Practical X-Ray Work," by R. Norris Wolfenden, M.D., B.A. Camb., also illustrated; and one on "Climatic Treatment of Consumption," by F. deHavilland Hall, M.D., F.R.C.P. This article is one of great interest and value to physicians in general practice.

Among the excellent articles which introduce the review of progress in other special subjects may be mentioned that on "Advances in Skull Surgery," by Dr. Seneca D. Powell, of New York, and that on the "Surgery of the Spinal Cord," by William Thorburn, F.R.C.S., both thoroughly up to date and freely illustrated; also the very interesting and instructive chapters on Electro-Therapeutics, by Prof. A. D. Rockwell, of New York, and the graphically illustrated articles on "Skin Diseases," by T. Colcott Fox, M.B., of London. W. Soltau Fenwick, M.D., F.R.C.P., contributes an able and very valuable account of "Diseases of the Stomach," giving especial prominence to an intelligible description of many of the newer methods of treatment. Altogether, this work constitutes a most admirable hand-book of the newer things both in diagnosis and treatment, and one which busy practitioners must find indispensable.

The mechanical execution is creditable to the publishers, and the binding seems strong enough to bear even the constant usage which such a book must be expected to endure.

LA RADIOGRAPHIE ET LA RADIOSCOPIE CLINIQUES. Par le Dr. Regnier, chef du Laboratoire de radiographe a l'hopital de la Charite. 1 vol. in-16 carre de 100 pages, avec 11 figures, cartonne. *(Actualites Medicales.)* 1 fr. 50. Paris: Librairie J.-B. Bailliere et Fils.

This little book contains much valuable information for those who desire to acquire a knowledge of the clinical application of this new and accurate method of diagnosis.

Like all those, however, who prefer to employ the static machine for the production of the Roentgen rays, the author is handicapped by the inability of this form of apparatus to produce different qualities of the ray, and, conse-

quently, deals principally with the examination by means of the fluorescent screen. From this standpoint the book is admirable, but it lacks the detail which would make it most useful to the student, while the present achievements by means of the radiograph are apparently ignored, if they are known or understood.

Retinoscopy (or Shadow-Test). By James Thorington, M.D., Adjunct Professor of Diseases of the Eye in the Philadelphia Polyclinic and College for Graduates in Medicine, etc. Third edition, revised and enlarged. 43 illustrations, twelve of which are colored. Philadelphia, P. Blakiston's Son & Co. 1899. Price, $1.

The previous editions of this admirable little volume have been reviewed in this journal, and it only remains to say that the author, encouraged by its remarkable success, has attempted to still better it by adding some new illustrations, and changing some obscure phraseology. We cordially recommend it.

The American Year-Book of Medicine and Surgery. Collected and arranged by a large corps of writers, under the general editorial charge of George M. Gould, M.D. Philadelphia, W. B. Saunders, 925 Walnut Street. 1899.

This volume is fully up to the standard of its predecessors. Doctors Alfred Stengel and D. L. Edsall have ably taken up and completed the important work in the field of General Medicine which was laid down by Prof. William Pepper at his untimely death. Each of the main departments into which the book is divided is introduced by an admirable summary of the most important advances and developments made during the preceding year. These are brief but comprehensive. They are a decided convenience to the busy physicians who have not time even to read the whole of such an excellent compendium as the volume itself offers. The various phases of the progress of our medical art are in the main accurately and fairly summarized. In some instances the editors have taken the liberty of accepting the results of certain investigations or clinical experiences as conclusive, while other reports which are even more striking are given little prominence; but probably they have their own reasons for taking the reports of some men *cum grano salis*. Judgment is always fallible, and the best of us have our predilections and prejudices; but for the most part the editors of this very full and complete year-book have been eminently fair and just. Numerous illustrations add much to the interest and clearness of the articles, and in that part of the volume under the head of Dermatology there are some particularly fine colored plates. The letter-press and binding leave nothing to be desired.

An American Text-Book of Diseases of the Eye, Ear, Nose and Throat. Edited by G. E. deSchweinitz, A.M., M.D., and B. Alex. Randall, M.A., M.D., Ph.D. Illustrated with 766 engravings, 59 of them in colors. Philadelphia, W. B. Saunders, 925 Walnut Street. 1899. Price, cloth, $7; one-half morocco, $8.

This massive volume is the joint work of about sixty prominent American specialists, and it is safe to say that no important thought in the three specialties is omitted. The section on the eye includes 598 pages; that on the ear, 188 pages; and that on the nose and throat 407 pages. Each chapter of the book has been well written (or well edited), as there is a general uniformity of excellence in conciseness, simplicity of language, practicality and thoroughness. Some of the collaborators have taken rather extreme positions on questions of moot; but in the main they have realized that a text-book must give

only safe and generally acknowledged facts, leaving points of theoretic discussion for the larger systems, and monographs. The illustrations are numerous, and though some are old they are selected with good judgment.

Some of the chapters in the section on ophthalmology are rather reminiscent of a recent text-book on ophthalmology, and of Norris and Oliver's system; but this could hardly be otherwise when the same authors are called upon so soon to duplicate their work.

The only really adverse criticism we have to make is upon the publisher's extremely bad taste in producing such a cumbersome and unwieldy volume, combining specialties that have very little correlation. Books upon ophthalmology should be published separately; but those upon the ear, nose and throat may be combined with very good reason. Despite the editors' mild *apologia,* we are inclined to think the combination was made for commercial purposes.

A Compend of Human Physiology. Especially Adapted for the Use of Medical Students. By Albert Brubaker, A.M., M.D. Ninth Edition. Revised and Enlarged, with New Illustrations and a Table of Physiologic Contents. Philadelphia, P. Blakiston's Son & Co., 1012 Walnut Street. 1899.

This is one of the best of the compends, and, besides the purpose for which intended, is a decidedly useful volume for physicians generally to have at hand. The chapter on "Foods and Dietetics" is especially good.

A Manual of Ophthalmic Surgery and Medicine. By Walter H. H. Jessop, Ophthalmic Surgeon to St. Bartholomew's Hospital, London. Published by P. Blakiston's Son and Co., Philadelphia. Price, cloth, $3 net. 1898.

The concise, lucid and comprehensive style of this manual will undoubtedly make it a prime favorite with medical undergraduates, for whom it is written. While not being as useful to the oculist or advanced practitioner as the more complete hand-book of Swanzy, it is written in a less technical and more elementary style, and, hence, is better adapted to the needs of the medical student. In the matter of illustration and typography, it is decidedly in advance of its predecessors.

As is usual with British works on ophthalmology, the sections upon the important subjects of refraction and muscular anomalies are not in full accord with the best American teaching. Again, the expression of such extreme views as the routine administration of a general anesthetic, "preferably chloroform" (p. 117), in the performance of iridectomy, will not likely raise the American student in the esteem of his ophthalmic examiner.

Annual and Analytical Cyclopedia of Practical Medicine. By Charles E. deM. Sajous, M.D., and one hundred associate editors. Illustrated with chromo-lithographs, engravings, and maps. Vol. II. Philadelphia, New York, Chicago, The F. A. Davis Company, Publishers. 1899.

Volume II. of this really great and exhaustive work begins with an excellent article on Bromid of Ethyl and on the Bromides and Bromates, by Archie Stockwell, and ends with a very thorough one on Diphtheria, by W. P. Northrup and David Bovaird. Over six hundred royal octavo pages are thus taken up with the discussion of the diseases and remedies whose names begin with C, and part of those whose names have for their initials B and D. Such an elaborate scheme involves an immense amount of work. When completed, it will constitute probably the most extensive and exhaustive medical encyclopedia ever written. It will be invaluable and indispensable as a work of reference for every medical writer and teacher. Every article

in the present volume gives evidence of much research by one who is a master of the subject. Prof. Adams' account of Cirrhosis of the Liver, and that on Diabetes by Prof. Lepine, of Lyons, are especially excellent. Dilatation of the Heart is very ably considered by Herman Vickers, of Boston—though it is to be regretted that his discussion of the treatment is so condensed, and especially that he could not have devoted more than a dozen lines to the highly important methods by the Nauheim baths and resisted movements and to the graduated walking and climbing exercises advocated by Oertel. The illustrations are numerous and remarkably good, some of those in the article on Cholelithiasis being quite unsurpassed as specimens of the lithographer's art. In fact, the mechanical execution of the volume is in every way particularly praiseworthy.

NOTES ON SURGERY FOR NURSES. By Joseph Bell, M.D., F.R.C.S., Edin. Fifth edition, thoroughly revised. Edinburgh, Oliver and Boyd, Tweedale Court. 1899.

This little book contains much valuable information of an elementary kind, clearly and systematically arranged. Every nurse would be the better for having studied it carefully, and for having it at hand for the purpose of reference.

NERVOUS AND MENTAL DISEASES. By Archibald Church, M.D., Professor of Clinical Neurology and Mental Diseases in the Northwestern University Medical School (Chicago), etc., and Frederick Peterson, M.D., Clinical Professor of Mental Diseases in the Women's Medical College, New York, etc. With 305 Illustrations. Philadelphia, W. B. Saunders, 925 Walnut Street. 1899.

The authors state, in their very short and modest preface, that their book "has been written for medical students and general practitioners." For the benefit of the latter, the authors, it might be said by way of criticism, should have devoted a larger share of the work to the subject of treatment. With regard to most of the diseases, while etiology, symptoms, pathology, etc., have been quite fully considered, the discussion of the treatment is very much condensed, so as to be in some cases little more than a series of terse suggestions. This is especially true of the first part of the work in the Nervous Diseases, by Prof. Church. Prof. Peterson, in the second part, devoted to Mental Diseases, has given a fairly satisfactory account of the therapeutics of nearly every one of the types of insanity, and has ventured upon a pardonable excursion beyond the proper domain of his subject in order to present the ablest, most interesting and most practically helpful discussion of epilepsy which is to be found in any text-book. But this is Peterson's favorite field of effort, one to which he has devoted an extraordinary amount of study and beneficent work.

Having thus frankly criticised some features of the book, we desire to express our appreciation of the intimate and practical acquaintance with his subject which each one of the two distinguished authors manifests. The result is a model text-book for the student, concise, yet clear, forcible and graceful in expression. If practitioners might desire more therapeutic aid in regard to many of the nervous diseases than has been vouchsafed them, it may be truly said, on the other hand, that they will not be able to obtain anywhere so much for their money in the way of scientific description, well illustrated, accurate and thoroughly up to date. And the therapy recommended is almost without exception in thorough accord with the very latest teachings of the best authors. The letter-press, illustrations and binding are all excellent.

CORRESPONDENCE.

Some Proposed Restrictions of Marriage.

Philadelphia, February 1, 1899.

To the Editor of the International Medical Magazine:

Dear Sir—Permit me to express the following objections in reference to the bill framed by Dr. A. H. Burr, in his paper on "State Regulation of Marriage for the Prevention of Communicable and Hereditary Diseases," published in the December issue of the *Journal of the American Medical Association.* That the state should take some action to protect the innocent from preventible diseases, as well as to protect society from a progeny of degenerates, is admitted by all sensible persons, but the question of How? is still an open one. In this case, as in all similar ones where the necessity of legislation is involved, we must take into consideration the applicability of a certain law not only to the needs, but the mental state of the community for which the law in question is intended. It does not matter how necessary or wise a law may be, it will remain a dead-letter so long as the people are not able to appreciate it. The act proposed by Dr. Burr is open to the following objections:

1. It would be next to impossible, if not actually cruel, to compel a young girl to submit to a physical examination, which alone can establish a positive diagnosis (of course, I take it for granted that the author includes in his act also the female sex).

2. This act would undoubtedly tend to discourage marriage, which is already in a state of progressive decline.

3. The young men debarred from matrimony by a communicable disease will be tempted to resort to illicit intercourse with the objects of their passionate desires, thus leading to increase of seduction.

4. The unfortunate girl, seduced by her gonorrheic or syphilitic lover, will be deprived of marriage — the only means of preventing her life from being blasted — since he, the lover, could not get a license.

5. The further increase of prostitution would be an inevitable result of the decrease of marriage, thus establishing a vicious circle.

6. The prevalence of specific diseases is so great that too large a portion of the community would be at once affected by such a drastic measure, and its enforcement would be almost impossible.

Moreover, we must bear in mind that all measures similar to those proposed by Dr. Burr are ineffective so long as the social environment favoring the development of certain evils, against which they are directed, remains unchanged. Under social environment, I include prostitution, economic conditions, etc. But if a palliative is all we can at present hope for, would it not be more practical to consider communicable disease which would affect the healthy parent, as well as the progeny, as sufficient ground for divorce? While the physician should endeavor to educate the people to the appreciation of the evil results that will accrue to the offspring if sexual relations,

under such circumstances, are kept up. Education is always a more potent factor in civilization than legislation.

Hoping to invite further discussion of the matter, I remain,

Respectfully yours,

A. Robin, M.D.

PRACTICAL NOTES.

Some of the untoward Effects of Mercurial Injections. H. T. Klotz has observed pulmonary emboli to follow the intramuscular injection of insoluble preparations of mercury. Of 100 patients subjected to this form of treatment, 7 suffered from emboli as a result of the injection.

Elevation of Temperature in Eclampsia. Gmeiner finds an elevation of temperature, when the attacks are frequent and occur in rapid succession. The fever is intermittent in character. On the other hand, if the patient has no more than six attacks, and is conscious, the temperature remains normal. This relation between the temperature and severity of attack is of great prognostic significance, since there is always a proportional relation between the toxicity of the blood, frequency of attacks and temperature elevation.

The Treatment of Bronchial Asthma. Prof. Von. Noorden considers atropin as a curative agent in this affection. He begins with a daily dose of 0.5 mg. internally, increasing it every 2 or 3 days by 0.5 mg., until 4 mg. are taken daily. Then the dose is gradually diminished. The treatment is thus kept up for 4 to 6 weeks, and repeated after the lapse of half a year, when both the duration and dose are diminished. The results obtained by him were in some cases remarkable. It is, of course, needless to say that the patients should be watched, although as a rule they bear large doses of atropin very well.

Estimating Water in Milk, Butter, Oils, etc. A. Wroblewski describes a simple and effective means for estimating the water present in milk, fat, butter, etc. He cuts long, narrow strips of Swedish filter-paper, and rolls them up into loose cylinders. From five to ten of these are then closely packed into a beaker; after desiccation for 6 to 8 hours, at a temperature of 100° to 105°C, 10 or 20 cc. of milk are carefully dropped from a pipette all over the edges of the cylinders, until the latter are saturated, and avoiding leaving any surplus of liquid at the bottom of the beaker. This latter is then placed in the drying chamber, dried from 6 to 8 hours at 100° to 105°C, and then weighed. The difference in weight represents the water originally present in the milk. With fats the same process is carried out; when solid, weighed quantities are placed on the ends of the cylinders, and the whole gently warmed until the paper has absorbed all the melted fat. The further procedure is then the same as with milk.—*Journal of Pharmacy.*

MEDICAL NEWS AND MISCELLANY.

The Question of Homeopathy in Russia. In view of the proposed modification of the legislation as to homeopathy, Prof. Manasein read before the St. Petersburg Medico-Chirurgical Society a paper on the homeopathic treatment of skin and venereal diseases, in which he related several instances in which patients under homeopathic treatment came to him when the disease had progressed already to an extent which placed the patient beyond recovery. Other members present corroborated the author's statements by their own experience of a similar nature.

Rupture of the Heart. Dr. Neboluborn reports in the *Dnewnik Obstestwa Vratchy,* of Kasan, Russia, an interesting case of spontaneous rupture of the heart. The deceased was 60 years old, an alcoholic, and, during his last years, suffered from shortness of breath. He was found dead on a chair one morning, and an autopsy revealed a tear in the left ventricle 2 cm. long, the edges being irregular and corrugated. A microscopic examination disclosed fatty degeneration of the heart, acute pericarditis and atheromatous degeneration of the aorta.

A Woman with a Penis. A remarkable instance of this malformation was revealed by Dr. Heygebayer, of Warshama, Russia. A Jewish woman, 27 years old, and recently delivered of a strong boy, applied for a position as wet nurse, and was examined by Dr. H. She was found to possess all the attributes of a well-built woman. Her sexual organs, including clitoris, were perfectly normal. One cm. below the post fourchette a pendulous body resembling in its structure and appearance the male penis, and of the size of the little finger, was found. At the end of the glans, where the meatus is normally situated in man, there was a slight depression. On manipulation, the organ became erect, and the woman experienced a pleasurable sensation. She refused to have it removed.—*Vratch.*

A Case of Generalized Vaccinia. Dr. D'Espinegeuf reported a case of a girl 11 months old, who, having been vaccinated, suffered from a general pustular eruption which appeared on the eighth day after vaccination. Four pustules appeared on the mucous membrane of the mouth. There was no eczema. Constitutional disturbance was slight. Temperature slightly elevated and normal on the eleventh day. On the nineteenth day the pustules dried up, and patient recovered.

Infection through Ritual Circumcision. Prof. Neumann demonstrated, before the Society of Physicians in Vienna, an infant who was infected by tuberculosis at the site of the circumcision.

PRESCRIPTIONS BY NOTED THERAPEUTISTS.

ANTISEPSIS, INTESTINAL.

℞ Alpha-naphthol., ... 4
Phenacetin., ... 1–2

M. ft. pulv. div. in parta eq. No. v.

S. One powder every three to four hours.

Or:

℞ Alpha-naphthol., ... 2
Olei ricini, ... 30
Olei menthae piper., . . gtt. i

M. S. To be taken in two doses at an interval of one hour.—MAXIMOVITSCH.

ANTISEPTIC POWDER.

℞ Hydrarg. chlor. corros., 0.0012
Acid. boric, ... 28.34
Acid. tannic, ... 0 60
Sacch. lact., ... 56.63

M. S. For external use.—PICK.

ASCITES.

℞ Mass. hydrarg.,
Pulv. digital.,
Pulv. scillae, ... āā gr. xii

M. ft. pil. No. xii. S. One three times a day.—NIEMEYER.

ASTHMA.

℞ Potas. iodidi, ... ʒ iii
Extr. belladonnae, fl., . f ʒ i
Extr. lobeliae, fl., ... f ʒ ii
Extr. grindeliae, fl., ... f ʒ iv
Glycerini,
Aq. destillatae, ... āā f ℥ iss

M. S Teaspoonful every two, three or four hours, as necessary.—BARTHOLOW.

ASTHMA.

℞ Extr. strammon., ... 0.02
Extr. liquor, ... 0.15
Kali iodid., ... 0.2
Ethyl. chlor. ..... gtt. x

M. S. Take three times daily.—SIDNEY MARTIN.

FOR MERCURIAL STOMATITIS.

℞ Magn. carbon.,
Risom. iridis,
Talc,
Sapon. medic., ... āā 5.0
Ol. menth. pip., ... gtt. x
Muc. acaciae q. s. ft. massa.

Sig. Use as a tooth soap.—HELMKAMPFF.

FOR CORNS.

℞ Liq. kali caust.,
Tr. iodii, ... āā 5 grm.
Glycerini, ... 20 c.c.
Aquae dest., ... 40 c.c.

S. Apply morning and night.—*Medicinsky Wjestnik.*

FOR PRURITUS OF THE SCROTUM.

℞ Hyd. chlor. Corr., ... 0.05
Alcoholi,
Aq. chamomil., ... āā 25 grms.
Chloroform, ... gtt. v
Aq. lauroceras, ... 100 c.c.

S. Use as a lotion.

FOR INFLUENZA.

℞ Quin. salicyl., ... 0.2
Phenacetin, ... 0.15
Camphor, ... 0.02
M. ft. pulv. no. i.

S. One every 4 hours.—BACCELLI.

FOR URTICARIA.

℞ Aq. amygdal. amar, ... 5 c.c.
Chloral hydrat., ... 0.5 gm.
Cocain muriat., ... 1.0
Aquae destil., ad ..... 50 c.c.

M. S. Use externally.—*Journal de Médécine de Paris.*